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IN THE
Supreme Court of the United States

OCTOBER TERM, 1940

NO. 57

RAILROAD COMMISSION OF TEXAS ET AL., *Appellants*,

v.

HUMBLE OIL & REFINING COMPANY, *Appellee*.

BRIEF FOR APPELLEE

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v.

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BRIEF FOR APPELLEE

OPINION BELOW

The opinion of the United States District Court for the Western District of Texas is not reported. An informal oral opinion was rendered on February 21, 1940 (R. 565), and findings of fact and conclusions of law were entered on March 20, 1940. (R. 573.)

STATEMENT OF GROUNDS FOR JURISDICTION

The jurisdiction of the Supreme Court of the United States is invoked under Sections 238 and 266 of the Judicial Code, as amended by the Act of February 13, 1925. (U. S. C. A., Title 28, Sections 345 and 380.)

The judgment appealed from is dated March 19, 1940, and was filed on March 20, 1940. (R. 570.) The appeal was allowed in this case by an order of the District Court entered on April 1, 1940. (R. 602.) The record was filed in this Court on April 19, 1940, and the order noting probable jurisdiction was entered on June 3, 1940.

STATEMENT OF THE CASE

1. Proceedings in the District Court.

Appellants' statement of the proceedings below is substantially correct; however, additional facts should be given. The statement by appellants fails to show that appellee attacked the proration orders on the ground that they deny to it the equal protection of the laws, in addition to taking its properties without due process of law, in violation of the Fourteenth Amendment to the Constitution of the United States. (R. 22, 47, 50.)

Appellants' statement also fails to state that appellee alleged that the proration order of June 19, 1939, providing that each well in the field should be allowed daily 2.32% of its hourly potential producing capacity as determined by the Commission, was actually applied contrary to its express terms, with the result that such order as applied was practically a per-well order.[1] (R. 9, 10, 580.)

[1]Appellee alleged that the order as written provided that each well should be allowed to produce daily only 2.32% of its hourly potential producing capacity as determined by the Commission; that contrary to its express terms, the Commission enforced and applied the order in an entirely different manner; that wells hav-

2. Issues Involved.

Appellee contends that the evidence clearly shows, with no substantial evidence to the contrary, that the particular methods of proration set forth in the orders under attack fail to allocate to appellee, in accordance with its property rights, its fair share of the oil produced in the East Texas Field; that such orders are, therefore, arbitrary, unreasonable, discriminatory, confiscatory and void as to appellee, in that they violate its rights under the due process and equal protection clauses of the Fourteenth Amendment, and do not allocate the production on a reasonable basis as required by the statutes of Texas; that there is no public necessity that the method of distribution employed be enforced against appellee in order to prevent waste, or for any other lawful reason; and that the Federal Courts have the power and duty to afford to appellee a judicial review of the orders complained of, to determine appellee's property rights, and to decide whether or not they have been invaded.

Appellee is raising no question as to the validity of the conservation or proration laws of the State; does not assail as being wasteful the top allowable for the East Texas Field fixed by the Commission;

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ing assigned potentials ranging from 20 barrels per day to 865 barrels per hour each, were arbitrarily assigned a flat allowable of 20 barrels per day each, which was more than 2.32% of their hourly potentials (R. 9, 580); that only such wells as had assigned to them hourly potentials in excess of 865 barrels were limited to 2.32% of their hourly potentials; that the order was practically a per-well order; that marginal wells in the field, that is, pumping wells incapable of making as much as 20 barrels per day, some 554 in number, were permitted to produce to capacity. (R. 9, 10.)

does not place in issue the small allocation made to the 514 marginal wells in the field, such wells having an allowable of less than 1% of the field allowable; *and does not advocate or insist upon any particular plan of proration.*

3. General Description of Field.

The East Texas Field is one huge reservoir embracing some 133,000 surface acres, extending about 40 miles in length north and south, and averaging about 4 miles in width east and west. (R. 79, 574, 575.) A cross-section of the field is in the shape of a huge inverted triangle which is tilted upward from west to east (R. 575), the eastern extremity being about 180 feet higher than the western extremity. (R. 393.) The oil reservoir is in the Woodbine sand, and is formed by impervious material above, impervious material under the east side and water under the west side. (R. 4, 34, 575.) The Woodbine sand is a huge sand body, outcropping about 150 miles west of the field; and, being filled with water, a great hydrostatic pressure is exerted on the oil reservoir. (R. 4, 34, 575.) The sands are very porous and permeable, and there is free intercommunication between all portions of the field. (R. 88, 89, 576.) However, on the extreme east edge of the field there is a strip of tight, less permeable sand extending from the north to the south end of the field, being about 500 feet in width, except in the southeastern part of the field where it widens to form a relatively small area wider than 500 feet. (R. 91, 108.) One well is capable of draining

as much as 10 acres, except perhaps in the strip just mentioned. (R. 266.) The oil sands are very thin on the extreme west; they increase in thickness going east to about 90 or 100 feet in the middle of the field, called the fairway; they then decrease in thickness going farther east until they pinch out to nothing on the extreme eastern edge of the field. (R. 575.) A graphic cross section of the field is shown at the bottom of appellee's Original Exhibit No. 19 which accompanies the record. (Offered, R. 157.)

The water underlying the west half of the field is the principal source of energy and exerts a pressure upward and eastward, with the pressure averaging at the time of trial about 1200 pounds per square inch on the west side and about 900 pounds per square inch on the east side of the field. There is a pressure gradient from west to east. (R. 575, 576.) This pressure differential causes oil to migrate from the west across the fairway to the east side of the field as the oil is produced. (R. 576.) Fluids flow from areas of higher to areas of lower pressure, resulting not only in local migration to areas where the rate of withdrawal is high, but also in a general movement upward and eastward. (R. 576.) Considering the varying densities to which properties in the field have been drilled, there will be non-ratable withdrawals from the field if much of the allowable is prorated on a per-well basis or any basis giving too much value to wells, thus resulting in an uneven and irregular rise of the water table, and causing physical waste. (R. 576.) As oil is withdrawn from the reservoir, the water table rises, progressively drowning out the

wells on the western edge of the field (R. 195); and as time goes on the water table will continue to rise, drowning out first the west one-third, then the fairway, and finally the eastern portion of the field (R. 195, 258), for the eastern margin of the field is some 40 to 80 feet higher than the highest point in the fairway. (R. 258, 416, 427.)

Since the field was discovered about 10 years ago, some 613 wells have been abandoned, of which 450 were on the west side, and only 163 were on the east side. (R. 391.) Practically all abandonments on the east side are in the narrow strip of about 500 feet wide where the sand is thin and very tight. (R. 114, 417.) The field has about 26,000 wells, but it is drilled on a very irregular or non-uniform pattern. (R. 579.) This is graphically shown on the original maps introduced in evidence by appellee which accompany the record. (Appellee's Exhibit 1, offered, R. 74; Exhibit 2, offered, R. 75; Exhibit 3, offered, R. 76; and Exhibit 4, offered, R. 77.) The field is drilled to an average density of one well to 5.17 acres (R. 578) although, as stated, the drilling pattern is extremely non-uniform.[2] (R. 579.)

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[2]The following table illustrates the varying densities to which wells are drilled in the field:

Number of Acres	*Number of Wells*	*Density Range (Ac. per Well)*	*Average Density (Ac. per Well)*
109	360	.1 to .4	.3
374	523	.5 to .99	.71
2,013	1,336	1 to 1.9	1.5
5,637	2,237	2 to 2.9	2.5
30,160	7,331	3 to 4.9	4.1
57,485	9,879	5 to 6.9	5.85
37,159	4,128	7 up	9.0

(R. 472, 552, 579.)

(Continued on page 7)

4. Description of Appellee's Properties.

Appellee owns leases covering 14,656 surface acres, including 11.4% of the producing acreage, in the field. (R. 577.) They are located in all parts of the field as is shown by the maps mentioned above. About 7,700 acres of its leases are located in the west half of the field overlying the water table, while about 6,900 acres of its leases lie in the east half. (R. 95.) The average thickness of the oil sand under appellee's leases is about 10 feet greater than the average for the field as a whole. (R. 577.) *By reason of this fact, appellee's percentage of the oil in place is greater than its percentage of the surface acreage in the field.* Originally, 14.3% of the net oil sand in the field lay under appellee's properties (R. 81); and although appellee has been permitted to produce only 9.6% of the past production in the field, it so happens, as we shall later show, that because of the average position occupied by appellee's properties in the field, they still have in place under them 14.3% of the recoverable oil remaining in the field. (R. 83, 121, 122, 577, 578.)

Some 2,547 wells have been drilled on appellee's properties (R. 82), being 9.8% of the wells drilled in the field. Its leases are drilled to an average density

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This shows the large percentage of wells on tracts drilled to a density of less than 5 acres per well, and demonstrates as incorrect the statement in appellants' brief, page 54, to the effect that the wide variances in density have very little influence on the allowables "because there are so few wells drilled on small tracts" and "about two-thirds of the wells in the field are located on leases drilled to approximately the same density as leases of Humble Oil & Refining Company." Appellee's leases are drilled to an average density of 5.8 acres per well. (R. 578.)

of one well to 5.8 acres compared with the field average of 5.17 acres per well, the average density of wells on all properties, exclusive of appellee's property, being 5.1 acres per well. (R. 578.) Appellee has drilled enough wells on its properties to recover efficiently without waste the recoverable oil under its leases, and to produce its fair share of the allowable. (R. 585.)

5. The Proration Orders and Schedules and Their Effect on Appellee's Allowable Production.

a. *June Order and Schedule.*

While the order of June 19, 1939, provides that each well shall be allowed to produce daily 2.32% of its hourly potential capacity as determined by the Commission,[3] the Commission, in administering the order, did not allocate production on such basis. If it had allocated production in accordance with the order, some 18,951 wells would actually have received daily allowables ranging from about 4.6 barrels to slightly less than 20 barrels. However, contrary to the terms

[3]As used in the order, "hourly potential capacity" of a well means the amount of oil which the well is capable of producing in one hour. Actually, the Commission does not take the potential of each well. Some 70 wells, known as key wells, are selected over the field as being representative wells, typical of all wells in the area. The hourly potentials of these key wells are taken, then potential contour lines are drawn. From the contour map, potentials of all wells are assigned. A similar procedure is followed with respect to pressures.

Obviously, such method of determining potentials and pressures assumes a high degree of uniformity in sand conditions in any particular area, for a key well controls a large area. The assumption is justified.

of the order, the Commission, by its schedule of allowables, actually allocated the allowable production on a 98% per well basis of 20 barrels each. The field allowable of 521,500 barrels per day was actually distributed as follows: (a) 559 marginal wells (pumping wells incapable of producing 20 barrels daily) were allowed to produce all they could, being a total of 6400 barrels daily, about 1% of the field allowable (R. 582); (b) 18,951 wells having assigned potentials varying from 20 barrels daily up to 865 barrels hourly were allotted a flat 20 barrels daily each, or a total of 379,000 barrels daily; and, (c) 6,300 wells, each having an assigned hourly potential of 865 barrels or more, were permitted to produce 2.32% of their assigned hourly potential capacity, or a total of 135,900 barrels daily. However, after allotting 20 barrels each to these 6300 wells, there actually remained only *from seven thousand to ten thousand* barrels to be prorated to the better wells with high potentials, as a result of the use of the potential formula stated in the order. The range between the poorest and the best wells was from 20 to about 26 barrels, and largely from 20 to 22 barrels. (R. 580.)

On August 10, 1939, a three-judge court granted a preliminary injunction restraining the enforcement of the June 19th order against appellee. (R. 38.) A few days thereafter, the Commission issued an order shutting down the entire East Texas Field for two weeks (R. 241), and on September 11th issued a new proration order for the East Texas Field which is discussed below.

b. *September and January Orders and Schedules.*

The orders of September 11th and 29th, 1939, and of January 24th, 1940, and the schedules issued in connection therewith, are all substantially the same. (R. 473, 476, 487, offered, R. 138, 139, R. 581, appellant's brief, pp. 7, 8.) Appellants' brief, page 6, correctly quotes the portion of the September order which provides the plan of allocating the allowable production. The trial court found, and it is undisputed, that these orders operate as follows (R. 581, 582): The allowable for the field for each producing day was approximately 691,000 barrels, of which (a) 514 marginal wells, incapable of making 20 barrels daily, were allotted what they could make, or a total of 6,245 barrels daily, being less than 1% of the field allowable; (b) 25,456 wells, being all other wells in the field, were allotted a flat 20 barrels each per day, or a total of 509,000 barrels, and (c) the remainder of the daily field allowable, 176,000 barrels, was allotted to all the 25,456 non-marginal wells, according to a formula which considered potential, bottom-hole pressure, acreage and sand thickness.

This method of allocation resulted in distribution of three-fourths of the field allowable on a flat per well basis of 20 barrels each. Only about one-fourth of the field allowable was distributed in accordance with the factors of potential, bottom-hole pressure, acreage and sand thickness. All non-marginal wells, whether or not they were receiving more than their fair shares by virtue of the flat 20-barrels allowable, were awarded an *additional* amount under the for-

mula, so that no non-marginal well received exactly 20 barrels. In other words, each non-marginal well was first allowed to produce 20 barrels per day regardless of its potential, bottom-hole pressure, acreage, sand thickness or the oil in place under it, and was also permitted to produce an additional amount over and above the 20-barrel per day allowable. (R. 474.) Obviously, the 20 barrels per day was not a minimum allowable but was in fact a base allowable. (R. 474.)

c. *Operation of Orders Upon Appellee.*

The effect upon appellee of the order of June, and the orders of September and January, may be summarized as follows:

	June Order	Later Orders
Scheduled daily allowable	52,000 bbls.	77,000 bbls.
Appellee's per cent oil in place	14.3%	14.3%
Per cent of field allowable to appellee	9.932%	11.17%
Loss (per cent field allowable)	4.4%	3.17%
Loss (pct. Humble allowable)	44%	29%
Loss in barrels daily	22,800 bbls.	21,600 bbls.

(R. 142, 143, 582, 583).[4]

[4]In connection with the June order and the September and January orders the Commission issued orders shutting down the field on certain days, except that under the January order the marginal wells were not shut in. In view of the shut-down orders, the average daily allowable over a monthly period for the field and for appellee's properties was proportionately reduced, but in a relative sense the figures remain the same. In order to avoid confusion, the shut-downs will not be referred to unless the discussion requires that this be done in connection with a particular point.

Appellee does not contend, as appellants assert it does, that the field must be prorated currently, or at any time, upon the basis of reserves or oil in place or upon any other particular basis. (R. 21, 22, 45.) It so happens that, because appellee's properties are scattered all over the field, and occupy an average position, it cannot *currently* obtain its fair share of the oil unless it currently receives about 14.3% of the field allowable, which happens at this time to be its percentage of the reserves of the entire field. (R. 121.) Appellee does not contend, as appellants seem to think, that the allowable for each of its leases must be distributed in the proportion that reserves under each lease bear to reserves of the entire field. Whatever the method of allocation employed may be, appellee is entitled to its fair share of the field allowable.

d. *Order Now in Effect.*

Shortly after this Court handed down its opinion in the case of *Railroad Commission of Texas et al. v. Rowan & Nichols Oil Company,* 60 S. Ct. 1021, the Railroad Commission issued an emergency order for the East Texas Field dated June 19, 1940, and effective from June 22nd to July 7, 1940. Under date of July 5, 1940, it issued another order for the East Texas Field effective from July 7th to September 1, 1940. On August 28, 1940, the Commission issued another order for the East Texas Field effective during the months of September, October and November, 1940. All three of these orders were substantially the same as the order of June 19, 1939, as enforced and

applied by the Commission. The top allowable under the September and January orders was 691,000 barrels. It is now about 521,500 barrels, the same as under the order of June, 1939. A copy of that portion of the order of August 28, 1940, relating to the East Texas Field, is copied in the appendix. The Commission is now enforcing the latter order against the appellee.

By stipulation of the parties (R. 471) the pleadings were made to relate to future orders substantially the same as the ones actually complained of. The injunction issued by the Court in the final judgment applies to such future orders. (R. 570.) On page 33 of their brief, appellants admit that the order of June 19, 1939, is more drastic in its effect upon appellee than are the September and January orders. The injunction and this appeal involve the order of June 19, 1939, and all subsequent orders, including the order now in force, since such orders are substantially the same as the September and January orders, being even more drastic than the last mentioned orders.

SUMMARY OF ARGUMENT

1. This case is not controlled by the decision of this Court in the case of *Railroad Commission of Texas et al. v. Rowan & Nichols Oil Company,* 60 S. Ct. 1021, nor did the trial court substitute its judgment for that of the Railroad Commission.

2. Appellee is the owner of the oil underlying its leases in the East Texas Field; and the Railroad Commission, in distributing the total daily production

from the field among the producers, must afford appellee a reasonable opportunity to recover such oil or its equivalent. The due process and equal protection clauses of the Fourteenth Amendment require the Commission, as nearly as practicable, to protect appellee's property rights; that is, within reasonable limits, to prevent drainage from appellee's property which is not compensated by counter drainage. A Texas statute, requiring that alocation be made on a reasonable basis, further requires the Commission to respect and protect appellee's property rights.

3. The trial court having found that the facts are without dispute and that the orders complained of as to appellee are discriminatory, confiscatory and unreasonable, and there being no real dispute in the record that the orders as to appellee are discriminatory, confiscatory, and unreasonable, the judgment of the trial court should be affirmed.

4. The trial court after a trial *de novo* held that the orders as to appellee were discriminatory and confiscatory in violation of the Fourteenth Amendment, and were unreasonable in violation of the Texas statute; hence, if there were a conflict in the evidence, the Court properly performed its judicial function in resolving such conflict and in holding that the orders were void as to appellee. Such findings being fully supported by the evidence, the judgment of the trial court should be affirmed.

5. The evidence in this case clearly shows that the orders complained of as to appellee are discriminatory and confiscatory, in violation of the due process and

equal protection clauses of the Fourteenth Amendment, and are unreasonable, in violation of the Texas statute. In view of the restricted field allowable, the large number of wells, the varying densities to which wells are drilled, the striking variances in the amounts of oil in place under the several properties, and the longer life of most leases in the eastern portion as compared with the life of leases in the rest of the field, the use of the base allowable of twenty barrels necessarily renders the orders complained of discriminatory, confiscatory and unreasonable as to appellee, is wholly arbitrary and unnecessary, and bears no substantial relation to the prevention of physical waste.

6. Appellee used due diligence and exhausted its administrative remedy.

ARGUMENT

I.

This case is not controlled by the decision of this Court in the case of Railroad Commission of Texas et al. v. Rowan & Nichols Oil Company, 60 S. Ct. 1021, nor did the trial court substitute its judgment for that of the Railroad Commission.

This case is before this Court on its own record. The record here is not the same as the record in the *Rowan & Nichols* case.[5]

[5]On pages 13ff of his brief for appellant G. A. Sadler, Mr. Norman L. Meyers argues that the Rowan & Nichols case controls this case under the doctrine of *stare decisis*. He cites no author-

The order complained of in the *Rowan & Nichols* case may or may not have been confiscatory and discriminatory as to Rowan & Nichols Oil Company, depending upon the record applicable to that case and whether or not Rowan & Nichols Oil Company was able to show injury; but in no event does the situation as to Rowan & Nichols Oil Company control appellee's case.[6] The trial court found that the injury to appellee in this case "was clear, practically admitted." (R. 565.) It is fundamental that only those persons can successfully attack an order of the Commission who are injured by it, and prove their right to relief.

From the opinion of the majority of the Court in the *Rowan & Nichols* case, it would seem that there are many facts in the record of that case which are not in the record of this case; *and there are other matters relied on as facts by the majority opinion in that*

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ity whatever for his statement and gives no reason why the Rowan & Nichols case should be *stare decisis*. He entirely overlooks the essential fact that each case involving an attack on an order of the Railroad Commission on constitutional grounds, or on the ground of unreasonableness, must be decided upon its own facts. Any order may be confiscatory, discriminatory and unreasonable as to one operator and not be such as to another. In fact, if an order discriminates against appellee or takes appellee's property and gives it to other operators, or is unreasonable as to appellee, it must necessarily discriminate in favor of, or give appellee's oil to, other operators, and would not be discriminatory, confiscatory or unreasonable as to them.

[6]In the very beginning of the opinion in the Rowan & Nichols case, it is stated that the question before the court is the validity of the proration order "in so far as it applies to the respondent's wells." 60 S. Ct. 1022. Therefore, it clearly appears that the opinion is not a determination as to whether the orders here involved are invalid in so far as they apply to appellee's leases.

case which in this record are shown not to be the facts. An analysis of the *Rowan & Nichols* opinion and of the record in the present case shows that the two cases are entirely different. Among these differences are:

1. In the *Rowan & Nichols* opinion, the Court, in speaking of the proration program there involved, said:

> "By its order each well was allowed to produce 2.32% of its 'hourly potential'—that is, 2.32% of its hourly productive capacity under uncontrolled flow." 60 S. Ct. 1023.

The record in the case at bar shows that, under the order of June 19, 1939, some 514 marginal wells (wells capable of producing less than 20 barrels per day) were permitted to produce to their capacity (R. 139); some 19,000 wells with potentials ranging from 20 barrels per day to 865 barrels per hour, were permitted to produce a flat 20 barrels daily, and not 2.32% of their hourly potential (R. 351); while the remaining wells, about 6000 in number, and having hourly potentials in excess of 865 barrels, were permitted to produce 2.32% of their hourly potential. (R. 351, 580.) Since each well in this last group was given 20 barrels, less than 10,000 barrels was distributed on the potential basis among the best wells and properties.

2. In the *Rowan & Nichols* case the Court stated:

> "But the practical operation of this order was largely cut across by allowances made to 'marginal wells.' These are wells which, if their low

> productive capacity were legally curtailed, would have to be prematurely abandoned. Therefore, the Texas statute gives them a special status. In accord with its policy toward these marginal wells, the Commission freed them from the burden of its hourly potential formula by allowing them production up to twenty barrels a day. *Because of the large number of these low capacity units in the East Texas Field,* approximately 385,000 barrels out of a total daily 'allowable' of 522,000 barrels were exempt from the restricting formula, leaving only about 136,000 for the class within which respondent's wells fell. * * * Moreover, the allowance made to marginal wells absorbs so much of the total 'allowable' as to make the Commission's order in effect an allocation on a flat per well basis." 60 S. Ct. 1023. (Italics ours.)

There is no Texas statute which has been found by appellee, and none is cited or claimed to exist by appellants, which requires or directs the Commission to allow each well in the field 20 barrels daily, or *any* well in the field as much as 20 barrels daily if it can produce *more* than 20 barrels daily. There is a statute, known as the marginal-well statute (Acts of Texas, 1933, Reg. Sess., c. 97, p. 215) which is applicable *only* to pumping wells, and which, with respect to the wells of the depths of those in the East Texas Field, permits a pumping well that cannot produce as much as 20 barrels per day to produce to capacity. However, in the *Rowan & Nichols* opinion, the Court, in speaking of the total of 385,000 barrels allocated by permitting each well to produce as much as 20 barrels per day, said:

> "Therefore the Texas statute gives them a special status. In accordance with its policy toward these marginal wells, the Commission freed them from the burden of its hourly potential formula by allowing them production up to 20 barrels per day."

Since there is no statute requiring or directing the Commission to permit each well to produce as much as 20 barrels per day if it is capable of producing more than that amount, the record in the *Rowan & Nichols* case *must have shown that there were at least* 19,200 *pumping wells which could not produce as much as* 20 *barrels per day;* and that each of these wells could produce almost 20 barrels per day, for the total declared to be allotted to the statutory marginal wells was 385,000 barrels. The facts in the record of the case at bar, without any dispute whatever, show a very different factual situation from that stated by the Court to be shown by the record in the *Rowan & Nichols* case.

This record shows that there are only 514 marginal wells which could be classified as "low capacity units" (R. 139, 582) with an allowable of only about 6245 barrels per day, being less than one per cent of the field allowable. (R. 582.) This left about 515,000 barrels to be prorated under the June order and about 685,000 barrels to be prorated under the September and January orders among approximately 25,450 non-marginal wells in the field. (R. 580-582.) It is clear therefore that the record of the case at bar shows a factual situation with respect to "low capacity units"

or marginal wells which is entirely different from what must have been shown with respect to such wells in the record in the *Rowan & Nichols* case.

3. In the *Rowan & Nichols* opinion, the Court said that the reason why the Commission's proration formula permitted other leaseholders to capture oil at a more rapid rate than Rowan & Nichols were permitted to capture from their properties was

> "due to the allocation formula itself, *and more especially to the permission granted marginal wells to produce without limit up to 20 barrels a day.*" 60 S. Ct. 1023. (Italics ours.)

The record in this case shows that the allowance to the 514 marginal wells is about 6,250 barrels, or less than 1% of the field allowable (R. 139); and that it is the 20 barrels daily per well allowable to the non-marginal wells which consumes 98% of the field allowable under the June order and about 75% of the field allowable under the September and January orders. (R. 139, 140, 349, 580, 582.)

4. Possibly due to something appearing in the record of the *Rowan & Nichols* case, this Court seems to have misunderstood the so-called "rule of capture" and its effect upon the conservation program in Texas or elsewhere. The Court said:

> "State agencies have encountered innumerable difficulties in trying to adjust the many conflicting interests which grow out of the rule of capture and its implications." 60 S. Ct. 1024.

It seems to be implied that the rule of capture stood in the way of the adoption of a fair method of alloca-

tion, or caused the Commission to do something it would not have done except for such rule, and, therefore, the unreasonable, discriminatory and confiscatory nature of the order of the Commission should be condoned in the face of such difficulties.

The rule of capture has nothing to do with the amount of oil which an operator should be permitted to produce under proration. In *Brown v. Humble Oil & Refining Company,* 126 Tex. 296 (1935), the court declared that the rule of capture is a secondary and supplementary rule of convenience not in conflict with the rule as to ownership in place, but merely operating to quiet title to oil actually produced. As pointed out in the *Brown* case there is nothing in the rule of capture which prevents the Commission from adopting a fair method of allocation, or which would require the Commission to restrain one operator from producing in order that another operator will be permitted to drain the oil from under the lands of the former, or which would justify the Commission in carrying out such a program. This point is more fully discussed under Part II, pages 31, 32 hereof.

5. In the opinion in the *Rowan & Nichols* case, the Court said:

> "For some years the Texas Commission has been engaged in experimental endeavor to devise appropriate formulas for a fair allotment of the allowable production. The commitment of such a delicate task to the administrative process has not escaped challenge in the courts, and at times the challenge has been successful. Compare MacMillan v. Railroad Commission, D. C., 51 F. 2d 400; Constantin v. Smith, D. C., 57 F. 2d 227;

> Peoples' Petroleum Producers v. Smith, D. C., 1 F. Supp. 361; Amazon Petroleum Corp. v. Railroad Commission, D. C., 5 F. Supp. 633." 60 S. Ct. 1024.

Also in the opinion it is said:

> "If the history of proration is any guide, the present order is but one more item in a continuous series of adjustments." 60 S. Ct. 1026.

Neither in the *MacMillan* case, nor in the *Constantin* case, nor in the *Amazon* case, three of the four cases cited in the quotation above, was there any decision on the validity of a proration formula, and the point was not made an issue. Those cases primarily raised the question of the right of the Commission or the military authorities to fix the top allowable in the face of statutory provisions, or to interfere at all with production by complainant. In the *Peoples* case, the fourth and last cited above, the validity of a method of allocation *was* involved and *was* decided. That case, like the one at bar, involved a per-well method of distribution; and the Court declared it to be unreasonable and confiscatory.

Shortly after the decision in the *Peoples* case, the Commission put into effect, in April, 1933, a new order for the field, generally known as the "per well potential order," which uses the same general method of proration now in force. Some of the differences resulting from the order of April, 1933, and the present order are as follows: Under the 1933 order, the top allowable was more than 800,000 barrels, while it is now about 521,500 barrels; in 1933, there were about

9,000 wells, while there are now about 26,000 wells; in 1933, each well was authorized to produce 15% of its hourly potential, while under the order of June, 1939, and the order now in force, the percentage is 2.32%, but actually the distribution is 98% on a per well basis; in April, 1933, an average east side well received 40 barrels per day, an average fairway well about 135 barrels, and an average west side well about 60 barrels, while under the June, 1939, order and others like it, each well is permitted to produce about 20 barrels, while under the September and January orders the spread is slight, but nothing to compare with that resulting from the order of April, 1933, nor was the east side so greatly favored in the order of 1933. (R. 405-7.)

When the order of April, 1933, was put in force, several suits were filed in the Federal Court attacking the validity of the order on various grounds, partly on the ground that top allowable would likely cause waste, but primarily on the ground that the method of distribution gave too much value to mere wells. The court denied preliminary injunction, declaring that the order, under the facts, should be upheld, at least until a hearing on the merits. The cases were never tried on their merits. *Legal History of Conservation of Oil and Gas, A Symposium* (1939), p. 241-242.

Since 1933, approximately 17,000 wells have been drilled in the East Texas Field, and the top allowable instead of going up has gone down; consequently, since 1933 there has been a gradual decrease in the spread

between the wells on good properties and the wells on poorer properties, so that the effect of the per-well potential method of distribution has materially changed, reaching the point, prior to the trial of this case, where each well was receiving substantially the same amount, regardless of oil in place, position on structure, potential, or density of drilling. In a real sense, the allocation formula, reasonably fair under the facts as they existed in 1933, became oppressive under changed conditions.

There are other cases involving proration formulas for fields in Texas. In *Boxrollium v. Smith,* 4 F. Supp. 624 (S. D. Tex. 1933), not cited in the quotation above, a three-judge Federal Court upheld an order of the Commission which distributed allowable about 50% on potential and 50% on acreage. In *Henderson v. Terrell,* 24 F. Supp. 147 (1938), not cited above, a three-judge Federal Court, dealing with proration of gas, upheld a formula allocating production 2/3 on acreage and 1/3 on well potential. The statute as to gas directed the Commission to prevent drainage, which the court declared was "a simple and lawful basis for the action of the Commission." The Court upheld the formula (2/3 on acreage and 1/3 on potential) because it was shown that its effect was to allocate production so that there was no reasonably preventable drainage.

It would appear, therefore, that though the Commission has been involved in litigation with respect to formulas for allocation of production, it has not seen fit to adopt a formula similar in terms or effect to

those which were upheld in the *Boxrollium* and *Henderson* cases or in the cases heard on application for preliminary injunction in 1933. The Commission, instead of adopting a formula similar in effect to one of those upheld by the courts, has adopted for the East Texas Field a formula which, under facts such as have existed for some time, is almost wholly a per-well formula, *such as was declared void* in the *Peoples* case, and which does not reasonably prevent drainage. The *arbitrary* nature of the current program of the Commission arises from its *failure* to make "a continuous series of adjustments" in the light of court decisions and changed facts.

Apparently, this Court, when it decided the *Rowan & Nichols* case, did not have all the facts before it with respect to litigation involving proration formulas. There is nothing in the record in this case, nor in the history of proration litigation, showing that the Commission, with respect to the East Texas Field, has made any serious effort to work out or to use a fair formula in the light of changed conditions; and there is nothing to show that the courts have harassed the Commission in its efforts to write a proper formula. *Legal History of Conservation of Oil and Gas, A Symposium,* pp. 228 ff., published 1939 by the Mineral Section of the American Bar Association.

6. In the *Rowan & Nichols* opinion the Court said:

> "A controversy like this always calls for fresh reminder that courts must not substitute their notions of expediency and fairness for those which have guided the agencies to whom the formulation and execution of policy have been entrusted." (60 S. Ct. 1024.

The record in this case shows that there was no effort on the part of the trial court to substitute its own ideas of fairness for those of the Commission. It made no suggestion as to how the field should be prorated. The trial court found the orders complained of to be unreasonable, confiscatory and discriminatory as to appellee, and simply exercised the judicial function of declaring them to be invalid. It did not attempt to write a new proration order, or even to suggest that the field should be prorated in accordance with any particular formula. (R. 566, 567.)

7. The Court further said:

> "The Commission's experts further insisted that, though much technical progress has been made, estimates of recoverable reserves beneath the surface of a particular tract remain largely an indeterminate venture. * * *." 60 S. Ct. 1024, 1025.

The record in this case clearly shows that while oil in place or recoverable reserves cannot be estimated with absolute accuracy in the East Texas Field, they can be fairly approximated, and that in estimating the *comparative* quantities of oil in place in a given tract and in the field as a whole, the estimate can be made with almost complete accuracy. (R. 169, 170, 193, 577.) In *Brown v. Humble*, also involving the East Texas Field, the Court stated that the amount of oil in place can be determined with reasonable accuracy. That case was decided five years ago. Obviously there has been an advance in the science of estimating oil in place since then. The record in this case

shows that the Commission's engineers, appellee's engineers, and Mr. Buck each made an independent estimate of the oil in place or the net effective oil sand in the vast East Texas Field, and arrived at almost precisely the same result. (R. 80, 192, 248.) Here the experts actually did what the Commmision claimed in the *Rowan & Nichols* case could not be done.

8. In the *Rowan & Nichols* case the Court said that in granting exceptions to Rule 37

> "the Commission has granted exceptions to its general spacing rule on the basis of which investments have been made and wells drilled," and that "not only are the individual interests of the small operators involved, but their effect on the State's economy is an appropriate factor to be taken into account when plans are devised to keep the wells open." 60 S. Ct. 1025.

We do not know what the record in the *Rowan & Nichols* case shows; but the record in this case shows that on hundreds of the small tracts in the East Texas Field *not just one but several* wells have been drilled (see pages 91 and 92, *infra*), and that many larger tracts have been drilled down to a density of 2 acres or less (R. 92); for example, Mr. F. W. Fischer, whose case was tried along with appellee's case, has some 7 wells on a tract of .51 of an acre. (Plaintiff's Exhibit No. 11, p. 44, sent to this Court in original form, offered R. 138, 139.) The trial court held that Mr. Fischer had not shown that he was not getting his fair share, and denied an injunction to him. (R. 565.)

Nearly all wells in the field have been drilled for

more than two years and the investment in them should have been repaid. (R. 239, 586.) Pumping wells, unless producing much water, can be operated at a profit on 5 barrels or less per day, and flowing wells at even less than that. (R. 227, 228, 230, 437, 443, 586.) *There is nothing in the record in this case to show that the wells drilled on small tracts or densely drilled tracts are owned by small operators.*

Furthermore, there is no law in Texas which authorizes the Commission to consider "the individual interests of those small operators" or the "effect on the State's economy" or the "investments (which) have been made," as justification for permitting each well to produce a 20-barrel per day base allowable, or as justification for any method of allocation of production, which causes certain wells to drain oil from less densely but adequately drilled tracts and from tracts having vastly greater quantities of oil in place. Appellee asserts that the Commission has no roving authority and has no statutory mandate as a modern Robin Hood, with instructions to go forth and take from some for the benefit of others, or to redistribute property for the benefit of small operators or for the general good of the State's economy. If no such authority is given to the Commission, then one ground advanced by the Court as supporting the opinion in the *Rowan & Nichols* case does not apply to the case at bar.[7]

[7]This Court in Thompson v. Consolidated Gas Co., 300 U. S. 55-79 (1937) declared to be invalid a statute of Texas and an order of the Railroad Commission of Texas which, the Court said, undertook to provide a market for the operators who had none and whose gas wells were closed down, which order also caused drain-

9. The Court indicated that there was a conflict in the evidence in the *Rowan & Nichols* case (60 S. Ct. 1025), and that the Commission could exercise its power of continuous oversight to give relief against possible confiscation.

The trial court has found here that there is no substantial conflict in the evidence on the issues of unreasonableness, discrimination and confiscation. (R. 565, 587, 590.) Furthermore, the record here shows that appellee, without success, has made repeated efforts over a period of years to obtain relief from the Commission against its unreasonable, discriminatory and confiscatory orders (R. 337, 518, 586), and that appellee has been compelled to resort to the courts in order to protect its property against unreasonable, discriminatory and confiscatory orders. Whatever the record may have shown in the *Rowan & Nichols* case, the Court cannot assume, in the light of the record in this case, that the Commission will grant relief to appellee, because the record shows that it has persistently refused to do so. (R. 337, 518, 586.)

II.

Appellee is the owner of the oil underlying its leases in the East Texas Field; and the Railroad Commission, in distributing the total daily production from the field among the producers, must afford appellee a

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age from the plaintiff's property. This Court said: "Our law presents no more glaring instance of the taking of one man's property and giving it to another * * * and this Court has many times warned that one person's property may not be taken for the benefit of another private person without a justifying public purpose, even though compensation be paid."

reasonable opportunity to recover such oil or its equivalent. The due process and equal protection clauses of the Fourteenth Amendment require the Commission, as nearly as practicable, to protect appellee's property rights; that is, within reasonable limits, to prevent drainage from appellee's property which is not compensated by counter drainage. A Texas statute requiring that allocation be made on a reasonable basis further requires the Commission to respect and protect appellee's property rights.

As the owner of oil and gas leases in the East Texas Field, appellee is the owner of the oil and gas in place under the several tracts of land covered by such leases, subject to the rights of royalty owners. *Stephens County v. Mid-Kansas Oil & Gas Co.*, 113 Tex. 160 (1923); *Texas Company v. Davis*, 113 Tex. 321 (1923); *Brown v. Humble Oil & Refining Company*, 126 Tex. 296 (1935).[8]

Subject to reasonable regulation under the conservation laws for the prevention of waste, appellee is entitled to a reasonable opportunity to recover such oil, or its equivalent. *Brown v. Humble Oil & Refining Co.; Magnolia Petroleum Co. v. Blankenship*, 85 F. (2d) 553 (C. C. A. 5th, 1936). As was said in the *Brown* case:

> "The exercise of the police power under this rule (spacing Rule 37) does not change the rule of

[8]Appellants' brief, p. 37, cites the Brown case as holding the rule of ownership in place applied only to oil *originally* in place. This interpretation is wholly unjustified. The rule clearly contemplates that a person owns as of any given time the oil *then in place* under his land.

property. It merely regulates and controls the way in which his property shall be used and enjoyed. Each person still owns the oil and gas in place under his land, and each still has the right to possession, use, enjoyment, and ownership of the oil and gas produced through wells located on his land, regardless of its origin. The primary rule of ownership is still operative." (Parenthesis ours.)

Appellee is entitled to the present use and enjoyment of its properties along with other operators. It is entitled to recover its fair share of the field allowable currently and presently, along with other operators, and is not required to wait until some future and indefinite date to obtain its oil. *Spann v. City of Dallas,* 111 Tex. 350 (1921); *Sterling v. Constantin,* 287 U. S. 378 (1932).

Nor does the existence of the so-called rule of capture alter or diminish appellee's rights. The rule of capture has often been erroneously referred to as a rule inconsistent with the rule of ownership in place as recognized in Texas. Such references are unsound. The rule of capture in its legal sense is a supplementary, secondary, or incidental rule of convenience designed for protection of the property rights recognized by the rule of ownership in place. It is in no sense a limitation upon the owner's rights under the ownership in place rule or under the proration laws. As was said in *Brown v. Humble Oil & Refining Company:*

"The rule in Texas recognizes the ownership of oil and gas in place and gives to the lessee a determinable fee therein. * * *

"Owing to the peculiar characteristics of oil and gas, the foregoing rule of ownership of oil and gas in place should be considered in connection with the law of capture. This rule gives the right to produce all of the oil and gas that will flow out of the well on one's land; and this is a property right. And it is limited only by the physical possibility of the adjoining land owner diminishing the oil and gas under one's land by the exercise of the same right of capture. * * * *Both rules are subject to regulation under the police power of a State.*" (Italics added.)

Later in the opinion, the Court said (referring to the operation of the rule of capture under the conservation laws):

"The rule of convenience becomes secondary."

When the production of oil is limited by the rules, regulations, and orders of the Railroad Commission issued pursuant to the conservation statutes, the rule of capture merely operates to quiet title in the person who produces oil from wells located on his land. It does not authorize the Commission, by its proration program, to allocate to an operator more than his fair share of the production. The rule of capture has nothing to do with the amount of oil which should be allocated to an operator when the total field allowable is restricted. Hardwicke, *Rule of Capture and Its Implications as Applied to Oil and Gas,* 13 Tex. L. Rev. 391, 416. (June, 1935); Summers, *Legal Rights Against Drainage,* 18 Tex. L. Rev. 27, 41 (Dec., 1939); Part 4, *Hearings Before Sub-committee of the Committee on Interstate and Foreign Commerce* on H. Res.

290 and H. R. 7372, 76th Cong. 3rd Sess., 1940, p. 1479.[9]

The Railroad Commission of Texas is authorized, under the conservation laws of the State as an exercise of the police power, to prevent waste of oil and gas. Pursuant to this power, which is not challenged here, the Commission within reasonable limits may fix the total daily top allowable of oil which may be produced from the East Texas Field. In the interest of private property rights, however, the same statutes which permit the Commission to limit the total daily production of oil, direct it to allocate such total daily production among the several producers upon a *reasonable basis.* The acts of the Commission are also subject to limitations imposed by the Federal Constitution.

The function of the Railroad Commission is twofold. Its acts under the police power to prevent waste of oil and gas, performing such function, as shown by the record in this case, by fixing a daily top allowable for the field. But the Commission is also charged with a duty to protect the correlative rights of the several owners in the field. The one function, then, is primarily in the public interest; the other, for the protection of private property rights.

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[9]In the record of the hearings cited in the text it is pointed out, pages 1479-1480, that the term "rule of capture" is often used with different concepts, thereby frequently causing confusion in discussion unless definitions be given, or unless the context clearly shows the sense in which the term is used. In the record of the hearings, three concepts are stated in which the term is frequently used. Briefly they are: (*a*) the strict legal concept, such as is stated in this brief, which is recognized in the Brown case; (*b*) a condition in which there is no regulation of drilling or production; and (*c*) the antithesis of ownership in place.

In passing upon constitutional limitations upon the power of the Commission, the courts have held that any method of allocation, to be valid, must protect property rights; that is, must afford each owner a reasonable opportunity to produce the oil in place underlying his lease, or its equivalent. *Brown v. Humble Oil & Refining Company; Gulf Land Company v. Atlantic Refining Company,* 134 Tex. 59 (1939). As was said in the *Brown* case:

> "It is now, however, recognized that when an oil field has been fairly tested and developed, experts can determine approximately the amount of oil and gas in place in a common pool, and can also equitably determine the amount of oil and gas recoverable by the owner of each tract of land under certain operating conditions * * *." 126 Tex. 296.

The Court then quoted with approval from the case of *Ohio Oil Co. v. Indiana,* 177 U. S. 190, 202 (1900), as follows:

> "'Hence it is that the legislative power, from the peculiar nature of the rights and objects upon which it is to be exerted, can be manifested for the purpose of protecting all of the collective owners, by securing a just distribution, to arise from the enjoyment, by them, of their privilege to reduce to possession, and to reach the like end by preventing waste'." 126 Tex. 296, 309.

Then, speaking further, the Court observed:

> "This right to control the rate of flow in order to prevent waste also enables the Commission to offset the advantage obtained by one who is given an exception to the spacing rule by limiting his

allowable production to the extent necessary to overcome this advantage. In this way the Commission, by controlling the oil stored in the common reservoir, is enabled to carry out the dominant purpose of preventing waste, and, at the same time, permit each owner to enjoy the opportunity fully to realize upon his estate by developing and recovering his oil and gas." (p. 313.)

Or, as was said in the *Gulf Land Company* case:

"It is the law that every owner or lessee of land is entitled to a fair chance to recover the oil and gas in or under his land or their equivalents in kind." 134 Tex. 57, 71.

A three-judge Federal Court composed of Texas lawyers, in *Henderson v. Terrell,* 24 F. Supp. 147 (W. D. Tex., 1938), involving the proration of gas under the gas proration statute, likewise held that distribution must be made in accordance with property rights, saying:

"* * * * Whenever the legislature imposes lawful restrictions upon the quantity of oil or gas that may be produced, so that thereafter owners may not any longer, under the common-law rule of capture, fully fend for themselves, the duty rests upon the legislature to make provision for the proration and distribution of the allowed amount among the wells in the field, so that no one of those thus limited may take undue advantage of any other. * * *

"The legislature has definitely declared that the wells must be prorated so as to prevent cognizable and preventable drainage, and that in doing so all relevant factors must be taken into consideration. By so declaring it has fixed a simple and lawful basis for the action of the Commission."

In commenting upon the decision in the *Henderson v. Terrell* case, Mr. Summers, in *Legal Rights Against Drainage,* 18 Tex. L. Rev. 45, observed:

> "By this decision the court has done nothing more than apply the principle so often repeated in oil proration and spacing cases, to the effect that where proration and spacing orders are issued for waste prevention, they must protect producers against non-compensated and preventable drainage."

Thus, while the cases have used varying types of language to define a lease owner's property rights, all of such definitions come to this: *a method of allocation to be valid must prevent reasonably avoidable drainage which is not compensated by counter drainage.*[10]

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[10]The proration laws of Louisiana, New Mexico, and Arkansas define a lease owner's property rights and the duty of the administrative agency in substantially the same terms as those used in the Henderson case and in the article by Professor Summers. In the Louisiana law, being Act. 157 of 1940, Sec. 7 (d), it is provided:

"* * * (*d*) Subject to the reasonable necessities for prevention of waste, and to reasonable adjustment because of structural position, a producer's just and equitable share of the oil and gas in the pool (also sometimes referred to as a tract's just and equitable share) is that part of the authorized production for the pool (whether it be the total which could be produced without any restriction on the amount of production, or whether it be an amount less than that which the pool could produce if no restriction on amount were imposed) which *is substantially in the proportion that the quantity of recoverable oil and gas in the developed area of his tract or tracts in the pool bears to the recoverable oil and gas in the total developed area of the pool, in so far as these amounts can be practically ascertained; and to that end, the rules, regulations and orders of the Commissioner shall be such as will prevent or minimize reasonably avoidable net drainage from each developed area (that is, drainage which is not equalized by counter drainage), and will give to each producer*

Such property rights of owners of oil and gas leases have been consistently determined and protected in Federal Courts in numerous cases involving attacks under the Fourteenth Amendment upon orders of the Railroad Commission of Texas. Sterling v. Constantin, 287 U. S. 378 (1932); *Thompson v. Consolidated Gas Utilities Co.,* 300 U. S. 55 (1937); *Amazon Petroleum Corp. v. Railroad Commission of Texas,* 5 F. Supp. 633 (E. D. Tex., 1934); *MacMillan v. Railroad Commission,* 51 F. (2d) 400 (W. D. Tex., 1931); *Henderson v. Railroad Commission,* 56 F. (2d) 218 (W. D. Tex. 1932): *Peoples Petroleum Producers v. Smith,* 1 F. Supp. 361 (E. D. Tex., 1932).

In *Sterling v. Constantin* this Court said:

> "The existence and nature of the complainant's rights are not open to question. And ownership of the oil properties is undisputed. Their right to the enjoyment and use of these properties, subject to reasonable regulations by the State in the exercise of its power to prevent unnecessary loss, destruction and waste, is protected by the due process clause of the Fourteenth Amendment." (287 U. S. 378, 396.

The case of *Thompson v. Consolidated Gas Utilities Company* involved facts quite similar to those now before the Court. There, an order of the Railroad Commission of Texas prorating gas was attacked on

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the opportunity to use his just and equitable share of the reservoir energy. (Italics ours.)

The allocation provisions of similar statutes of other States are quoted in footnote 37 of Part 4, Hearings Before Sub-Committee of the Committee on Interstate and Foreign Commerce on H. Res. 290 and H. R. 7372, 76th Cong. 3rd Sess. 1940, p. 1490.

the ground that it was discriminatory and confiscatory, contrary to the provisions of the Fourteenth Amendment to the United States Constitution. In that case the Court held the proration order to be void because it violated complainant's property rights. The Court said:

> "It is settled that to all administrative regulations purporting to be made under authority legally delegated, there attaches a presumption of the existence of facts justifying the specific exercise. * * * But obviously the proration orders would not be valid if shown to bear no reasonable relation either to the prevention of waste or the protection of correlative rights, or if shown to be otherwise arbitrary." 300 U. S. 55, 69-70.

In numerous cases the State courts have also determined the property rights of an injured party in order to determine whether or not such rights were invaded by orders of the Railroad Commission. *Brown v. Humble Oil & Refining Company; Empire Gas & Fuel Co. v. Railroad Commission,* 94 S. W. (2d) 1240 (1936, error refused); *Railroad Commission v. Bass,* 10 S. W. (2d) 586 (1928); and *Atlantic Oil Production Co. v. Railroad Commission,* 85 S. W. (2d) 655 (1935).

Not only are appellee's property rights guarded against confiscation and discrimination in violation of the Fourteenth Amendment, but they are also protected by the statutes of Texas. Such statutes place definite limitations upon the power of the Commission in allocating the allowable production among operators in the East Texas Field. They provide in part:

"The Commission shall make and enforce rules, regulations and orders for the conservation of crude petroleum oil and natural gas and to prevent waste thereof, including rules, regulations or orders for the following purposes: * * *

"(4) To require wells to be drilled and operated in such manner as to prevent injury to adjoining property." Acts of Texas, 1935, 44th Leg. Reg. Sess., p. 180, c. 76, Sec. 4. (*Art. 6029, Vernon's Ann. Rev. Civ. Stat. of Texas*).

In Section 6 of the Act just cited (Sec. 7, Art. 6049c, *Vernon's Annotated Revised Civil Statutes of Texas*) it is provided:

"In the event any such rule, regulation or order which the Commission may adopt provides for the limitation or fixing of the production of crude petroleum oil or natural gas from wells producing gas only in any pool or portion thereof, the Commission shall distribute, prorate *or otherwise apportion or allocate the allowable production among the various producers on a reasonable basis.*" (Italics ours.)

In the case of *Railroad Commission of Texas v. Houston & Texas Central Railway Co.*, 90 Tex. 340, 354 (1897), the Court held that the orders of the Commission

"* * * * *might frequently be unreasonable and unjust and yet might not amount to the taking of property without proper compensation or without due process of law.*" (Italics ours.)

III.

The trial court having found that the facts are without dispute, and that the orders complained of as to

appellee are discriminatory, confiscatory and unreasonable, and there being no real dispute in the record that the orders as to appellee are discriminatory, confiscatory and unreasonable, the judgment of the trial court should be affirmed.

The trial court has found that under the orders complained of appellee has been discriminated against, and has suffered confiscation and irreparable injury. (R. 585, 588.) Furthermore, the Court found that the orders complained of as to appellee are unreasonable, in that they do not allocate the allowable production in the East Texas Field on a reasonable basis, and are, therefore, violative of the Texas statutes. (R. 565, 588.) It further found that there is no real conflict in the evidence. (R. 565, 587, 590.) This amounted to a finding that there was no substantial evidence in the record to justify findings contrary to those made, and that no reasonable person could have reached a contrary decision as to the facts.[11] When viewed as a whole and properly understood, it seems clear that there is no conflict in the record on these issues, and that the Court should not have made contrary findings.

Even appellants claim there is conflict in the evidence only on a few points. We wish to take up these

[11]In the second Rowan & Nichols case, which was tried along with the case at bar on the same record, the trial court found: "There was no substantial evidence to support the Commission's order and there was no showing made that the Commission had based the order on any finding, and there was no substantial evidence to support a finding upon which the order could be based." (P. 550 of the record in that case now pending on appeal in this Court.)

issues one by one and show from the record, viewed as a whole, that there is no real conflict on those issues.

1. Appellants tried to make it appear that there is conflict in the evidence as to whether it is possible to estimate the oil in place; and by inference they try to cast doubt as to whether appellee owns 14.3% of the oil in place in the field. Sorenson (R. 81-83, Moore (R. 169, 192, 193, 202), and Buck (R. 319, 320, 321) all say positively that recoverable oil in place can be estimated with reasonable approximation, although they admit that it can not be done exactly. Exactness, of course, is not necessary. *Brown et al. v. Humble Oil & Refining Company,* 126 Texas 296, 306, 316 (1935). Moore and Buck testified that while there was a possibility of error, the errors were such that they would apply to the field as a whole to the same extent as they would apply to any particular property; and that in determining the *relative amount* of recoverable oil under any lease as compared with the amount of recoverable oil in the field as a whole the estimate could be made almost free from error. (R. 169, 170, 202, 319, 320.) It is significant that the Railroad Commission, appellee's engineers, and Mr. Buck, separately have estimated the acre-feet of net effective oil sand in the East Texas Field to be practically the same. (R. 192, 320.) Mr. Hudnall, a witness for the Commission, admitted that he, for a long time, had calculated oil in place under various properties in the East Texas Field for various clients, and that leases are bought and sold and taxes are assessed and paid on the basis of such calculations, and

that such estimates are, for all practical purposes, accurate. (R. 429, 430.)

Thus, when the evidence is examined, all witnesses agreed that recoverable oil in place can be estimated with reasonable accuracy. There is no evidence in the record contrary to the testimony of Moore and Buck that *on a comparative basis* the reserves of oil in place can be estimated practically free from error. This is the important thing, because appellee has insisted, without contradiction in the record, that its percentage of the oil in place in the field is 14.3%. Mr. Sorenson testified (R. 81, 82, 83) that not only could the acre-feet of oil sand in place in the East Texas Field be accurately estimated, but that he had made the calculations from the company's records and from the Commission's isopach or sand-thickness map, and that these calculations show 14.3% of the oil in place in the field to be under appellee's leases. No witnesses disputed the fact that appellee's percentage of the oil in place in the field can be determined with almost absolute accuracy, and that 14.3% of the recoverable oil in place in the field is in place under appellee's leases.

2. Appellants in their argument seek to raise a question as to whether appellee's properties in the past have been depleted or drained to the extent shown by the undisputed facts in the record. Strictly speaking, past recovery figures are not of primary importance, except to show as a matter of history what has taken place under prior orders and to indicate what will take place in the future under similar orders. Under the law in Texas, from here on out, appellee is entitled to a reasonable opportunity to recover

the oil *now in place* under its leases; and while its losses by drainage from its leases under prior orders has been extremely great, appellee does not contend that it has the right in the future to make up for prior losses.

However, in connection with past losses, the Court found that appellee had been permitted to produce only about 9.6% of the accumulated production for the field and that it has been allowed to recover from its properties only 11/15 as much per acre-foot of oil sand depleted as the field as a whole has been permitted to produce per acre-foot of oil sand depleted. (R. 578.)

This finding is fully supported by the evidence of both Sorenson (R. 334) and Moore (R. 133, 135, 136, 137), who testified without contradiction that the past net drainage from appellee's leases amounted to the huge total of from 56,000,000 to 64,000,000 barrels. The East Texas Field is like a huge tank. Appellee originally had 14.3% of the oil in place. It has been permitted to produce only 9.6% of the accumulated production. It now has only 14.3% of the remaining oil in place in the field. If its properties had not been drained to an extent far in excess of the amount of oil appellee has been permitted to produce from its leases, appellee's percentage of the remaining oil in place would be considerably more than 14.3%. Its properties are scattered all over the field, and occupy an average or representative position. (R. 85, 121, 122.) Its properties are in the west and east portions of the field and in the fairway. It is obvious that its losses by drainage in the past have resulted

from the fact that it has not been permitted to produce at a rate commensurate with the rate at which other operators have been permitted to produce; and, as a result, its properties have been depleted more rapidly on the average than other properties in the field.

Both Sorenson and Moore testified without contradiction that, assuming the original water table was at 3320 feet subsea, appellee's leases had been depleted or drained to the extent of about 120,000 acre-feet of oil sand. (R. 190, 334.) Moore testified without contradiction that leases of other operators had been depleted to the extent of 790,694 acre-feet of oil sand, while the field as a whole had been drained or depleted to the extent of about 910,720 acre-feet of oil sand. (R. 190.) This indicated a recovery of 1100 barrels per acre-foot from appellee's properties and 1561 per acre-foot from other leases in the field and 1499 barrels per acre-foot from the field as a whole. (R. 334.) *Other operators recovered 40% more oil per acre-foot of oil sand depleted than did appellee.* (R. 190.) *This was caused by the relatively lower allowables given to the properties of appellee.*

On cross-examination, the recovery figures were challenged as being excessive; and Dr. Gardescu, a witness for appellants, said that he had never heard of actual recoveries of 1500 barrels per acre-foot of sand. Sorenson and Moore both testified that the indicated recoveries were excessive; but, without contradiction, explained the high indicated recoveries by showing that actually vast quantities of oil had been produced from a zone about 10 feet thick imme-

diately below minus 3320 feet, the latter being the plane above which no water was originally found. (R. 192, 193, 333.) Taking these facts into account, the actual recoveries from the field as a whole are reduced to a lower figure than 1499 barrels per acre-foot, and within expected limits. (R. 333.) Both witnesses showed that appellee's percentage of the *actual* recovery from the field was no greater than its percentage of the indicated recoveries (R. 193, 329, 334); that other operators in the field actually recovered from their properties at a higher rate than appellee actually recovered from its properties; and as a consequence, appellee's properties suffered drainage of from 56,000,000 to 64,000,000 barrels. (R. 133, 135, 136, 137, 190, 334.) Thus, regardless of what the exact recovery from the field may have been, appellee's leases have been permitted to recover only about 11/15 as much as the average leases in the field. (R. 190, 578.)

These losses have been suffered under orders similar to the order of June 19, 1939. The record shows that orders similar to it have been in effect for the past six years. (R. 408.) However, because of constant drilling and no increase in the top allowable, the average well allowable and the spread between the good and the bad wells steadily decreased until all wells were given substantially the same allowable.

It is significant that while appellants had Dr. Patten, the Chief Engineer of the Commission, on the stand, and had two other witnesses, they did not seek by any one of their witnesses to refute the testimony of Moore and Sorenson, with reference to appellee's

past losses. As a consequence, their testimony stands without dispute in the record. Under the admitted physical facts it could not be otherwise.

3. As to present recovery, appellants virtually admit that appellee is not recovering its fair share of the oil. They purport to dispose of appellee's admitted current loss of 3.13% of the total field allowable by stating that such has nothing to do with "the question of whether or not the Humble's leases are being drained by other operators, but constitute mere juggling with figures." (Appellants' brief, p. 44.) Appellants also take the position that the Railroad Commission is under no duty to allow an operator to produce his fair share currently, but may require him to wait until some future date to secure his oil, though permitting others similarly situated to produce more than their share currently.

2. We have shown that appellee's current ownership of 14.3% of the oil in place in the field is undisputed. Appellee's actual allowable of 9.932% under the June order and 11.17% under the September and January orders is admitted. It would seem that appellee's current loss of 3.13% is clear and undisputed, and appellee is being denied without legal warrant the present enjoyment of its properties. *Spann v. City of Dallas*, 111 Tex. 350, 355 (1921).

The undisputed facts show that appellee's properties are scattered all over the field and occupy an average or representative position (R. 85, 116, 121, 122); and that, considering their position on structure, some are adversely affected and some are aided

by the water drive; however, most of its leases are adversely affected by the water drive. (R. 91, 95, 113, 163, 164, 585.) As a consequence, appellee cannot currently obtain its fair share, unless its properties are permitted to produce currently substantially in proportion to the rate at which the properties of other operators in the field on the average are permitted to produce. (R. 45, 207.) Current avoidable drainage from appellee's properties will necessarily result unless its current allowable is substantially in proportion to its percentage of the oil in place in the field.[12]

[12]Moore testified (R. 164) that if the formula (potential times pressure times acreage times sand thickness) which was applied to 25% of the production under the September and January orders were applied to the field as a whole, appellee's allowable would be 14.6% of the field allowable. Sand thickness, pressures and potentials are the only factors in the allowable program which gave weight to position on structure. Since the appellee's leases are so widespread in the field, its leases in the eastern part of the field would gain almost the equivalent of what its leases in the western part of the field lose by action of the water drive, if the entire field allowable, rather than only 25% thereof, were prorated by use of the factors named. Under the orders complained of, appellee's leases in the west half of the field are not permitted to produce ratably with other leases in the west half of the field, nor are its leases in the east half of the field permitted to produce ratably with other leases in the east half of the field. As a consequence, other operators in the east half of the field reap the benefit of migration of oil from west to east. The oil migrating from west to east simply passes through or across appellee's leases and is produced in a large measure by wells on other properties, because of the fact that comparatively they have much larger allowables.

If appellee were to dispose of all of its leases in the west half of the field, its remaining leases would not then occupy a position representative of the field at all. The remaining leases, being in the east half, would be benefited by the time factor; that is, they would produce longer before being drowned out by water than would the leases in the west half of the field. If appellee were to sell all of its leases in the east half of the field, retaining those

The Court found (R. 565, 583) that the program of regulation complained of does not give to appellee the opportunity to produce currently its fair share, or prevent reasonably avoidable drainage from appellee's properties (R. 588), and that these facts are practically admitted. (R. 565.) There is no evidence in the record to the contrary.

4. Although in their briefs appellants argue that there is a conflict in the evidence as to whether or not, if the September and January orders were contained in force, appellee would ultimately obtain from the field an amount of oil at least equivalent to the oil originally in place beneath its leases, again when the record is considered as a whole, there is no real conflict in the evidence on this point. Appellee admittedly fares worse under the June order than under the September and January orders. Moore testified (R. 145, 184, 194, 195, 206, 207) that he had made a detailed calculation as to the ultimate effect upon

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in the west half, the situation would then be the reverse of that just stated. In either event, it would not be necessary that appellee be given currently an allowable approximately in proportion to its oil in place in order to receive ultimately the oil it owns in place or an equivalent amount. In the first instance, having only east side properties, appellee could be permitted to produce more slowly; while in the second instance, having only west side properties, it would be necessary for its wells to produce more rapidly. Its proper allowable would not, in such event, be that percentage of the field allowable which the oil in place under its leases would bear to the oil in place in the field.

The Commission could use any number of formulas, other than one based upon comparative reserves alone, which would afford to appellee an opportunity to recover its fair share of the oil, both currently and ultimately. Appellee repeats that it does not claim that the Commission *must* prorate the allowable on comparative reserves. It simply says the formula must, without discrimination, allow appellee to produce its fair share.

each of appellee's leases of the September and January orders, if continued in effect during the balance of the life of the field; and that from his calculations appellee's properties in the future would be drained by other operators to the extent of from 45,000,000 to 85,000,000 barrels; that is, appellee would be prevented by that much from producing the equivalent of the recoverable oil now in place under its leases. Appellants tried to make something out of the fact that Mr. Moore made his estimate range from 45 to 85 million barrels. He stated himself that he was doing this in order to be conservative, although he believed that 85 million barrels was substantially a correct figure. (R. 207.) If the lower figure is taken, still this shows how enormous appellee's losses will be. These losses will be higher under the June and the present orders, which are some 98% on a flat per well basis of 20 barrels each. If these future losses are added to the past losses shown on page 43 above, it will be seen that appellee will fail by over 100,000,000 barrels of oil of recovering the equivalent of the oil originally in place under its leases.

Appellants, in trying to show a conflict in the evidence as to relative recovery by appellee, and to show substantial evidence against the finding by the court as to ultimate recovery and injury, rely upon one statement made by Mr. Hudnall, witness for appellants, to the effect that he thought that appellee would ultimately produce its fair share if the September and January orders were continued in effect. ***Hudnall's statement on the point of ultimate recovery under the***

September and January orders was shown on cross examination to be a rank guess, not based on scientific calculations; because he admitted that he did not know how long the field would produce at the rate of 690,000 barrels per day (R. 413); that he had not calculated how much oil each of appellee's leases would produce, nor had he figured how long each of appellee's leases would produce if the September and January orders were continued in effect during the producing life of the field. He also admitted that it was possible to make such calculations. (R. 416, 418.) Moore made them. (R. 145, 206.)

Appellants further assert in their brief that since many of appellee's leases are situated in the fairway it will ultimately obtain its fair share of the oil, because they say that the fairway will be the last part of the field to be flooded.[13] Mr. Hudnall expressed

[13]On pages 58, 61 of their brief appellants contend that the eastern portions of the field will be shorter lived than the fairway due to the possibility that gas may come out of solution there at some time in the future due to loss of pressure. In support of this argument they cited testimony of Dr. Patten on page 359 of the record. There Dr. Patten stated that the leases on the eastern *margin* of the field would have comparatively a short life if the pressure should decline sufficiently that a gas cap is formed. On page 346 of the record Dr. Patten stated that the pressures could be maintained at approximately the present value for six or seven years in the future. At the top of page 359 of the record he stated that if the bottom-hole pressures were substantially decreased, he believed a gas cap would form along the east *edge* of the field "and that the effect of that gas cap, of course, would be to push some of the oil slightly down structure." This is the very flimsy prop upon which appellants base their argument. It wholly ignores the migration of oil to the east side which has taken place for the last nine years and which, according to Dr. Patten, should continue for at least six or seven years longer. (R. 436.) He nowhere suggests that oil in appreciable

the view that this result may follow (R. 394), on his impossible assumption that the field would be produced at the rate of 690,000 barrels per day during the balance of the life of the field. The record shows that the only portion of the east side of the field which has tight sands is a narrow band about 500 feet wide along the eastern margin of the field, except for a small area in the southeastern part of the field where the strip is some wider. (R. 91, 108.) Mr. Hudnall pointed out that there had been some 163 abandonments in this part of the field. (R. 391.) On cross examination, however, he admitted that immediately west of this area having tight sands, the oil sands were from 10 to 20 feet thick and were good oil sands. (R. 428.) He further admitted that the eastern part of the field was 40 to 80 feet higher than the highest portion of the fairway. (R. 416, 427.) All agree that oil is being pushed by the water; that there is regional migration from west to east; and that the water drive has maintained the pressures on the eastern part of the field at a high level, except in the narrow marginal strip mentioned above. (R. 347.) Coupled with this is the undisputed fact that, from the standpoint of water drive, the field is divided into two parts, roughly stated, the west half and the east half, the water underlying the west half. (R. 91, 576.) The water

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quantities will ever be driven from the east side down structure to the fairway. In the meantime, the east side properties will have produced far in excess of the equivalent of their original recoverable reserves. There is no evidence to the contrary. The undisputed evidence shows that a principal reason for loss of pressure in the eastern portion of the field is the high allowable given to east side wells. (R. 380, 428.)

table is gradually rising (R. 91, 195) and will rise more rapidly as the field becomes smaller through forced abandonments on the west side as wells go to water. (R. 427.) The major portion of appellee's leases lie over the water table and, therefore, oil is being driven from them to the east as the water rises. In order of water flooding, the eastern portion of the field will be drowned out last. (R. 116, 186, 195, 258.)

It follows that the water drive will push the oil from under appellee's leases in the west half of the field and in the fairway to enormous areas of thick, permeable sands to the east, which Mr. Hudnall admitted were 40 to 80 feet higher than the highest point in the fairway and had good oil sands, and where no abandonment of wells has taken place or will take place prior to abandonment in the fairway under anything like efficient operations.

When Mr. Hudnall's original statement is viewed in the light of his admissions on cross examination, and in the light of the unquestioned facts concerning the action of the physical forces in the field, the trial court was justified in its view that there was no substance in the claim that appellee in the long run would be able to recover its share of the oil because of the structural position of some of its leases.[14]

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[14] In footnote 30, on page 61, and in footnote 32, on page 63 of appellants' brief, appellants refer to certain testimony of Mr. Sorenson, alluded to on pages 331 and 332 of the record. In the testimony referred to, Mr. Sorenson was testifying in a Rule 37 hearing concerning the area which could be effectually drained by a well, and *was not speaking about allowables.* As stated by Mr. Sorenson: "We were talking about the uniformity of drilling." (R. 332.)

It is no proof that appellee will get its fair share to say that appellee's leases in the eastern part of the field will be benefited by migration of oil from west to east. Appellee's leases in the east half of the field are drilled to an average density of one well to 6.18 acres, these wells being sufficient in number to produce the oil under them if they are given a proper allowable, while other leases in that portion of the field are drilled to an average density of one well to 4.66 acres. (R. 163.) Under the plan of proration used, appellee's leases in the east half of the field are not permitted to produce ratably with leases of other operators. *It does appellee no good for oil to migrate to its leases in the east side of the field if it is not permitted to produce its leases ratably with other operators.* Appellee is placed in the position of losing large quantities of oil by migration from its west-half leases, and not being permitted to produce through its east-half leases anything like the equivalent of the oil that it loses from its west-side leases.

These facts are undisputed in the record, and effectually dispose of any argument of appellants that appellee's leases will benefit in the future. Mr. Moore took all of the facts with reference to the migration of oil from west to east into consideration in making his calculations concerning the losses appellee would suffer in the future under the existing orders. (R. 145, 206, 207.)

Furthermore, appellants in their brief (pp. 47, 48), contend by way of argument that Dr. Gardescu's testimony concerning appellee's future recovery justifies

the conclusion that appellee ultimately will produce its fair share of the oil from the field. Dr. Gardescu's testimony, when tested in the light of the method which he employed in determining what appellee's future recovery would be, clearly demonstrates that appellee could never recover its fair share of the oil from the field. Dr. Gardescu estimated that appellee's leases had been depleted to the extent of 16.82%. (R. 452, 453, 454.) He arrived at the result by dividing 119,000 (acre-feet of depletion from appellee's leases) by 707,700 (original acre-feet of sand under its leases). He then concluded that, since appellee's leases had produced approximately 131,000,000 barrels of oil (R. 116, 187, 190, 329), after having been depleted only to the extent of 16.82%, they would ultimately produce 780,000,000 barrels of oil when depleted 100%. This is a mathematical deduction.

If it is permissible to use such a method in estimating ultimate recovery from appellee's leases, it is equally permissible to use the same method in estimating ultimate recoveries from the field as a whole. The undisputed evidence shows that the field as a whole originally contained about 4,960,000 acre-feet of oil sand (R. 101, 192), and that the field has been depleted to the extent of approximately 910,720 acre-feet. (R. 190.) This indicated a depletion for the field of approximately 18.5%. The field has produced approximately 1,360,000,000 barrels of oil. (R. 115, 136.) If 18.5% of depletion equals 1,360,000,000 barrels, 100% depetion would equal approximately 7,400,000,000 barrels. Under Dr. Gardescu's method, therefore, it

would appear that the field ultimately would produce approximately 7,400,000,000 barrels of oil. Appellee's ultimate recovery under Dr. Gardescu's method would amount only to about 10.5% of the ultimate field recovery (780,000,000 divided by 7,400,000,000). According to Dr. Gardescu's method, therefore, appellee would fall short by 3.8% of the generally accepted five billion barrels estimated ultimate recovery from the field (R. 115, 117) of producing its 14.3% of the oil in place in the field. (14.3-10.5.) This would indicate a total loss by appellee of about 190,000,000 barrels of oil during the producing life of the field. This figure exceeds by about 41,000,000 barrels the highest figure given by Mr. Moore as his estimate of the ultimate losses which appellee would suffer from drainage, these estimates being 64,000,000 barrels in the past and 85,000,000 barrels in the future. (R. 136, 145.)

Of course, the fact should be reiterated that these *indicated* recovery figures are admittedly incorrect. (R. 191, 192, 193, 333, 334.) They are too high. However, if Dr. Gardescu's method were applied on the basis of *actual* recovery figures for the field as a whole and for appellee's properties, still, appellee's ultimate recovery would be the same percentage, that is, 10.5% of the ultimate recovery from the field. (R. 187, bottom of page.) This demonstrates the unreliability of Dr. Gardescu's method and assumptions, and shows the fallacy of his suggestion concerning appellee's future recovery of oil from the field. If it demonstrates anything, it shows that appellee would

fall far short of recovering its fair share under the orders complained of.

What has been said above refers to appellee's losses under the September and January orders, if continued in effect during the rest of the producing life of the field. *Nowhere in the record is there even a suggestion that appellee could ever produce its fair share ultimately under the June order, if continued in effect during the rest of the life of the field; and that type of order is now in force.* The undisputed evidence shows, and appellants admit in their brief, p. 35, that the June order is more drastic in its effect upon appellee than are the September and January orders. Since we have shown the enormous extent of appellee's ultimate losses under the September and January orders, it follows that its losses under the June order and the existing order would be much greater.

5. In their brief appellants state that the basic allowable of 20 barrels per well is necessary in order to prevent premature abandonment of wells. The evidence does not sustain this contention; and there is no real conflict in the evidence on this point. Not a single witness testified that it was necessary to give a 20-barrel minimum to the non-marginal wells in the field. Mr. Hudnall, a witness for the Commission, testified that he had never sought to defend the 20-barrel allocation per well. (R. 431.) At most the evidence shows that the few wells producing an excessive amount of water need a larger minimum allowable than any other class of wells, and that they do not need more than 10 barrels per day. (R. 227, 435, 437,

443.) But this does not begin to justify the application of the 20-barrel basic allowable to other pumping wells and to the flowing wells, all of which, according to the undisputed evidence, can be operated at a profit on an allowable of 5 barrels per day, or less. (R. 227-230-443.) In their brief (pp. 53-54) appellants give the excuse that the Commission does not wish to cut the allowable of good wells down below the amount given to marginal wells. This is not evidence; it is confession and avoidance. There is no evidence in the record to sustain such a statement. We have discussed this matter fully under the heading "Allowable of Twenty Barrels per Well Arbitrary and Not Necessary," on pages 102 *et seq.* of this brief.

We think we have clearly demonstrated that there is no real conflict in the evidence on the issues with respect to which appellants claim that conflict exists. There being no real conflict in the evidence, and the evidence showing and the trial court having found the orders to be discriminatory, confiscatory and unreasonable as to appellee, the judgment below should be affirmed.

IV.

The trial court, after a trial de novo, held that the orders as to appellee were discriminatory and confiscatory, in violation of the Fourteenth Amendment, and were unreasonable, in violation of the Texas statute; hence, if there were a conflict in the evidence, the Court properly performed its judicial function in

resolving such conflict and in holding that the orders were void as to appellee. Such findings being fully supported by the evidence, the judgment of the trial court should be affirmed.

As we have shown in part III of this Argument, there is no real conflict in the evidence concerning the essential facts. Appellants, however, assert that there is a conflict as to some of the facts. We believe we have shown that such conflict does not exist; but, even if it does exist, it is our position that, since constitutional questions of confiscation and discrimination, and the statutory question of reasonableness, are here involved, it was the duty of the trial court to resolve such conflicts. In this case the trial court did properly resolve such conflicts, if any existed.

1. The Trial Was De Novo.

In this case a trial *de novo* was actually held. Three judges, two of them Texans, and each with extended experience in litigation involving the conservation statutes of Texas[15] saw and heard the witnesses, saw

[15]Hon. Samuel H. Sibley, Circuit Judge, Fifth Circuit; Hon. Robert J. McMillan, District Judge, Western District of Texas; and Hon. James V. Allred, District Judge, Southern District of Texas.

Among other cases in which Judge Sibley participated involving problems similar to the problems in this case, were Magnolia Petroleum Co. v. Blankenship et al., 85 F. (2d) 553 (1936), and Rowan & Nichols Oil Co. v. Railroad Commmission, 107 F. (2d) 70 (1939). Among the cases in which Judge McMillan has participated are Texas Panhandle Gas Co. v. Thompson, 12 F. Sup. 462 (1935); Henderson v. Terrell, 24 F. Sup. 147 (1938); Magnolia Petroleum Co. v. Blankenship—no opinion, but see 85 F. (2d) 553; Rowan & Nichols Oil Co. v. Railroad Commission, 28

and examined the charts and maps while they were being explained, took advantage of the opportunity to ask questions, and were able to observe the effect of cross examination and of rebuttal testimony. During the trial, appellants did not suggest that the case be tried otherwise than *de novo;* but now, oddly, appellants say (p. 31, appellants' brief) that the court "had no authority to strike down the administrative orders where the plaintiffs failed to prove the records upon which the orders were based." This is a strange reversal of position; and no Texas authority is cited in support of the statement. It fails to take into account the established procedure for testing the validity of a Railroad Commission order, and the true function of a court in hearing a case of this character.

There was no requirement that the records of the hearings before the Commission be introduced. There is no state statute which provides that the validity of orders of the Railroad Commission of Texas with respect to conservation of oil and gas shall be tested on the record of hearings before the Commission. Indeed, there is no State statute which even requires the Commission to keep a true record of hearings held pursuant to the conservation laws, or to certify a record to any Court for purpose of review. No reported case, State or Federal, involving the unreasonableness, or confiscatory or discriminatory effect, of an oil or gas proration order of the Commission, has been found in which the issues were tried on the

F. Sup. 131 (1939). Judge Allred was formerly Attorney General of the State of Texas and later Governor, and has been intimately acquainted with the problems here involved.

record before the Commission. In each of them the trial has been *de novo;* and in not one of them does it appear that the record of the hearing before the Commission was introduced. It has been held, with respect to a similar review statute applicable to railroads and buses, that the record before the Commission is not even admissible in Court except for purpose of impeachment. *Railroad Commission of Texas v. Houston & Texas Central Railway Company,* 165 S. W. 491, 499 (Civ. App. 1913, application for writ of error dismissed); *Railroad Commission of Texas v. Rau,* 45 S. W. (2d) 413, 415 (Civ. App. 1931, application for writ of error dismissed). It would be proper, of course, to introduce the record before the Commission, if the claim were made that there was *no evidence* before the Commission as a basis for its order, or if there were alleged procedural defects, such as lack of notice and hearing. *Empire Gas & Fuel Co. v. Railroad Commission,* 94 S. W. (2d) 1240, 1244 (1936, error refused).

Furthermore, there is no Federal statute and no rule of the Federal Courts requiring that the validity of an order of a State commission should be tested on the record of the hearing before the Commission. This case was, therefore, properly tried on the evidence introduced in the trial court.

Appellants, in stating in a footnote (p. 29 of their brief) that "where the Railroad Commission has followed established procedure, its orders will not be set aside if reasonably supported by substantial evidence," suggest that the orders themselves contain

recitals which are equivalent to administrative findings, and that if the record in this case contains evidence supporting these findings, such findings should not be disturbed. This view is entirely out of keeping with the function of a court where constitutional issues, and the issue of reasonableness under the Texas statute, are involved. But even assuming there was merit in the point made by appellants, let us examine the recitals made by the Commission in its orders. The June and September orders (R. 477, offered 138, 139), and the January order (R. 487, offered, 138, 139), contain general recitals to the effect that the allowables for the State and the fields therein were fixed for the purpose of preventing waste. But the specific recitals in the June order and those in the September 11 order are in hopeless conflict. The September 11 order recites that, for each well to be allowed to produce its fair share and to prevent waste, the method of allocation should include the factors of potential, acre-feet of sand, and bottom-hole pressure.[16] The

[16]The following recitals apear in the September 11 order:

"Whereas, the Commission, after due notice, held a hearing in Austin, Texas, called for August 16, 1939, relating to the conservation of crude oil and natural gas in the East Texas Field and the prevention of waste thereof, at which hearing the Commission heard extensive testimony on the proper factors which should be included in an equitable distribution of the allowable production between the producing wells in the East Texas Field and regulations necessary for the prevention of waste in said Field, and

"Whereas, the Commission finds from the evidence submitted at its hearings that in order for each producing well to be allowed to produce its fair share of the allowable oil from the East Texas Field, that the method of allocation and distribution of the field's allowable between producing wells in this field should, in order to prevent waste, incorporate a minimum well allowable,

June order and the order now in force make the distribution upon substantially a per-well basis, with only slight weight being given with respect to a relatively few wells to the potential factor. Beside these recitals, there were no fact findings made by the Commission on the questions at issue in this case; and hence, other than the above, there are no administrative findings for a court to review. The only actual findings on the issues involved are those made by the trial court after a trial *de novo*.

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the potential capacity of the wells on each lease, the number of acre feet of oil saturated sand underlying the wells on each tract and the bottom-hole pressure of the wells located on each tract, and

"Whereas, the Commission finds from evidence submitted to it at numerous hearings, including the hearing of August 16, 1939, that the reservoir of the East Texas Field has its energy principally supplied by a hydrostatic drive which encroaches from the west to the east and that only a certain amount of crude oil can be withdrawn daily from the East Texas Field in order to utilize effectively the energy necessary to recover the greatest amount of oil ultimately from the reservoir, and

"Whereas, the Commission finds that in order to prevent waste in said field that the allowable production during the months of September and October, 1939, should not average more than 490,000 barrels per day over a thirty (30) day period, and that not more than 690,000 barrels of crude oil should be produced from the East Texsa Field in any one day during the months of September and October, 1939, and

* * * * *

"It is therefore ordered," etc. (R. 474, offered 138.)

It is noted that although the above order recites that the four factors should be considered to prevent waste and to constitute a fair method of allocation no value is assigned by the Commission to any one of the four factors mentioned. Consequently, it is impossible to say from the recitals in the orders what were the findings which prompted the Commission to write the orders involved in this case.

2. The Function of the Court in Affording A Judicial Review.

a. *Where Constitutional Issues Are Raised.*

Since in this case appellee has directly raised the constitutional question of unwarranted discrimination against it and the confiscation or taking of its property in violation of the due process and equal protection clauses of the Fourteenth Amendment, this is a case in which appellee is entitled to a judicial determination of its property rights and a judicial determination of whether or not those rights have been invaded. *Thompson v. Consolidated Gas Utilities Corporation,* 300 U. S. 55 (1937); *Sterling v. Constantin,* 287 U. S. 378 (1932); *Champlin Refining Company v. Corporation Commission,* 286 U. S. 210 (1931); *St. Joseph Stock Yard Company v. United States,* 298 U. S. 38 (1936). See also Summers *"Does The Regulation of Oil Production Require The Denial of Due Process And The Equal Protection Of The Laws,"* and Dickinson *"Judicial Review of Administrative Determinations, a Summary and Evaluation."*[17] *Rowan & Nichols* case.

A brief review of the cases above cited will show that such was the proper function of the trial court;

[17]The article by Summers was prepared for a meeting of the Section of Mineral Law, American Bar Association, in Philadelphia, September, 1940, and appears in a booklet published by the Section of Mineral Law containing all papers read at the meeting mentioned; and the article by Dickinson was prepared for the Institute on Administrative Law and Procedure at the annual meeting of the American Bar Association, Philadelphia, 1940. Copies of the booklet and of Mr. Dickinson's paper have been filed with the Librarian of the Supreme Court Library.

and that the trial court in this case properly performed its function of affording a judicial review.

The *Champlin* case was the first proration case to reach this Court. It primarily involved the contention that the statutes of Oklahoma and the proration orders issued thereunder were "repugnant to the due process and equal protection clauses of the Fourteenth Amendment and the commerce clause." 286 U. S. 210, 224. The three-judge trial court, after a trial *de novo* where there was much dispute as to the facts, made its findings, resolving the fact issues. This Court said:

> "The evidence before the trial court undoubtedly sustains the findings * * * and they are adopted here." 286 U. S. 210, 232.

We cannot distinguish that case from the case at bar, on the point that the trial court should make an independent determination of the fact issues.

The *Consolidated Gas* case, referred to in the minority opinion of Mr. Justice Roberts in the *Rowan & Nichols* case, is even more in point on the contention that the trial court in the case at bar properly made findings which should be upheld. Indeed, on the facts, the case at bar is stronger, for there were conflicts in the evidence in the *Consolidated Gas* case, and also elaborate findings of fact by the Commission, both of which are absent from this case. The *Consolidated Gas* case, it will be remembered, involved the validity of statutes of Texas and an order of the Railroad Commission of Texas pursuant thereto which limited the production of gas from the Panhandle Gas Field,

and which distributed the allowable among the operators. There were detailed fact findings in the Commission's order. (Pp. 476 and 497 of Record in the *Consolidated Gas* case, Docket No. 89, October Term, 1936.) A three-judge court heard the evidence in a trial *de novo,* made fact findings based on a great mass of conflicting evidence as to the existence of waste, physical facts in the field, reaction of the field while being produced, the effect of the order, and its reasonableness. The Court declared the order to be arbitrary and confiscatory as to the complainants, and beyond the authorized powers of the Commission. Injunction was issued. On appeal, the Commission in its brief filed in this Court, pages 179-187, argued that, in the face of substantial evidence in support of the Commission's findings as to the necessity and reasonableness of its order, the court should have resolved the fact issues in favor of the order of the Commission. In the brief for the Gas Company, pages 90-102, it was argued that the trial court properly made independent determination of the fact issues necessary to dispose of the constitutional issues raised. In an opinion by Mr. Justice Brandeis, without dissent, this Court upheld the action of the trial court, declaring in substance that the findings of fact, *though contrary to those made by the Commission,* were amply supported by the evidence, 300 U. S. 55, 73, and that the order of the Commission was arbitrary, confiscatory and beyond the authorized powers of the Commission, and should be enjoined.

This Court has decided another case from Texas,

Sterling v. Constantin, which appears to be in point and which involved the East Texas Field. Suit was brought by an oil operator who claimed that the Governor and the military authorities, under a declaration of martial law, were controlling the production of the East Texas Field in such manner as to take his property without due process of law. In spite of the great weight to be given to the recitals in the proclamation of a governor as to the existence of facts authorizing a declaration of martial law, a three-judge Federal Court, sitting in Texas, passed on the conflicting evidence and made its independent determination of the facts, holding that the recited grounds for declaring martial law did not exist, and that the officials and officers were without authority to control the production of the wells of complainant. This Court upheld the right of the lower court to make findings of fact, and also upheld the findings which were made. *This Court declared that complainant's right to the use and enjoyment of his oil properties in the East Texas Field, though subject to reasonable regulation to prevent waste, was protected by the due process clause of the Fourteenth Amendment to the Constitution of the United States, and the courts were under the duty to examine the facts in order to determine whether complainant's rights had been invaded.* 287 U. S. 378, 396-7. The analogy to the case at bar is obvious.

The same idea was expressed in the *St. Joseph* case, where the point here under discussion was again directly in issue; and the Court clearly undertook to

settle whatever conflict or confusion existed in the cases. The strong opinion on the point by Mr. Justice Brandeis concurring in the disposition of the case, but for different reasons from those expressed in the opinion for the majority, and the exhaustive review of the cases in both opinions, indicate how carefully the question was considered. In the opinion for the majority by Mr. Chief Justice Hughes, the following language was used:

> "Legislative agencies, with varying qualifications, work in a field peculiarly exposed to political demands. Some may be expert and impartial, others subservient. It is not difficult for them to observe requirements of law in giving a hearing and receiving evidence. But to say that their findings of fact may be made conclusive where constitutional rights of liberty and property are involved, although the evidence clearly establishes that the findings are wrong and constitutional rights have been invaded, is to place those rights at the mercy of administrative officials and seriously to impair the security inherent in our judicial safeguards. That prospect, with our multiplication of administrative agencies, is not one to be lightly regarded. It is said that we can retain judicial authority to examine the weight of evidence when the question concerns the right of personal liberty. But, if this be so, it is not because we are privileged to perform our judicial duty in that case and for reasons of convenience to disregard it in others. The principle applies when rights either of person or of property are protected by constitution restrictions." St. Joseph Stock Yards Co. v. United States, 298 U. S. 38, 52.

It is significant that Mr. Justice Brandeis wrote the

unanimous opinion of this Court in the *Consolidated Gas* case after the decision in the *St. Joseph* case. In the *Consolidated Gas* case he apparently accepted the point as settled by the *St. Joseph* case.

Some years ago Mr. Chief Justice Hughes, in discussing the question whether findings of fact by regulatory agencies should be made or could be made virtually immune to court review, expressed very aptly the probable results if court review on the facts should be a mere formality. He said:

> "The power of administrative bodies to make findings of fact which may be treated as conclusive, if there is evidence both ways, is a power of enormous consequence. An unscrupulous administrator might be tempted to say, 'let me find the facts * * * *I care little who lays down the general principles'.*" (Italics added. 46 Harv. L. Rev. 490.)

But appellants urge that under the holding in the *Rowan & Nichols* case it is now the viewpoint of this Court that the trial court should not have decided the fact issues, thereby resolving the conflicts which appellants claim to exist. The decision in the *Rowan & Nichols* case was based upon the record and issues in that case, and upon the court's interpretation thereof. Inasmuch as this Court in the *Rowan & Nichols* case did not overrule the *Consolidated Gas* case, the *Constantin* case, the *St. Joseph* case and other cases of similar import, we conclude that the Court considered that there were facts in the *Rowan & Nichols* case which would not cause it to be in conflict with the other cases mentioned.

It will thus be seen from any view that is taken of the case, the question whether confiscation and discrimination result from the method of distribution employed by the Railroad Commission, is a judicial question.[18] The Commission's findings, actual or presumed, under such circumstances are not conclusive upon the courts. It is not true, as the Commission contends (appellants' brief, pp. 28-31) that the Court should refuse to disturb whatever program of distribution the Commission may adopt, however unreason-

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[18]It is conclusively shown in this case that the fixing of the top allowable for the field is the act which has to do with waste prevention. The distribution of the field allowable really amounts to a partition of property, and calls for a determination of property rights. It is one thing to hold that the fixing of the top allowable, a waste prevention measure, should be upheld if reasonable minds could reach the same conclusion as the Commission did, and quite another to hold that the Commission must be upheld in its idea of law and of fair partition, even if witnesses should swear that the Commission was being reasonable and was protecting property rights. The Commission is not a court or a part of the judicial system, and it seems that the Texas Legislature could not legally delegate to the Commission the right to pass finally on property rights and to effect a partition. An attempt by the Texas Legislature to give an administrative board a similar right of partition with rsepect to water was held to be unconstitutional. Board of Water Engineers v. McKnight, 111 Tex. 82 (1921). It follows that the Commission has authority to make a virtual partition of oil properties only because, having authority to fix a top allowable for the field to prevent waste, it is necessary to declare how much each operator is authorized to produce.

Surely it is not the law that the courts, in testing the right of an operator under the Fourteenth Amendment, are without right to interfere though the overwhelming evidence, to say nothing of the undisputed evidence, shows that the Commission misinterpreted property rights or else has ignored them for undisclosed reasons, with the result that the method of allocation is unreasonable and denies the equal protection of the laws and results in a taking of property for the benefit of another without justification or adequate compensation.

able, discriminatory and confiscatory it may be, merely because the Commission finds, actually or presumptively, that the method protects property rights. This can not be the law, because the ultimate determination of property rights is a legal or judicial question.[19]

Unless administrative agencies, such as the Railroad Commission of Texas, are to be left entirely free to promulgate and enforce orders which have the effect of taking the property from one citizen and giving to another without compensation, or the effect of discriminating against one citizen in favor of another, the courts must determine the judicial question as to what are the property rights involved and whether in fact there is confiscation or discrimination. In a case of this kind the courts must pass upon the issues of

[19]It may be asserted from the case of South Carolina Highway Department v. Barnwell Bros., 303 U. S. 177, cited in the Rowan & Nichols opinion, that the sole function of the Court in the present case is to determine whether or not there is a rational basis for the orders under attack. The Barnwell case involved a statute of the State of South Carolina prohibiting the use of trucks on the state highways whose width exceeded 90 inches and whose weight, including load, exceeded 20,000 pounds. This statute was challenged under the commerce clause, and the due process and equal protection clauses of the Fourteenth Amendment. The Court held that it was impossible upon the basis of the whole record to say that the legislative act was without basis. In the Barnwell case the authority of the state to make and enforce reasonable regulations to govern traffic on the highway was involved. No private right of an individual was involved, because no one has a private property right to use the public highways in any particular way; and it was entirely proper for the State to regulate the use of the highways which it presumably had constructed and owned; and, furthermore, the state legislature has wider discretion in legislation regulating the use of the public highways than the Railroad Commission has in this case in allocating production in the East Texas Field. This is particularly true in view of the limitations placed upon the Railroad Commission by the Texas statute.

confiscation and discrimination, or else wholly retire from the field of protecting property rights under the Fourteenth Amendment.[20]

If the courts should fail or refuse so to function in such cases, a corrupt, tyrannical or unscrupulous administrative agency could always find a way to obtain sufficient evidence to raise an issue of fact, or to constitute conflicting evidence, or to make it appear that there is substantial evidence to support the order.[21]

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[20]How far afield some are willing and seek to go is illustrated by the argument of Mr. Meyers on pp. 15-19 of his brief for appellant G. A. Sadler. Mr. Meyers in effect takes the position that since the statute has authorized the Railroad Commission to allocate production among owners in the field, the Commission is free to make allocation on any basis it sees fit, and the courts can give no relief against an allocation order however discriminatory, confiscatory, unreasonable or arbitrary it may be, unless the evidence shows conclusively that the method is illegal. That is an amazing doctrine. A discriminatory or confiscatory act of the legislature would not be valid; yet we are told that if the legislature passes a valid conservation act and authorizes the Railroad Commission to administer the act, the Commission can administer the act virtually without let or hindrance, although the legislature has expressly limited the Commission by requiring that its proration orders must be reasonable. Under Mr. Meyers' theory, the Commission, under the guise of making an allocation of production in the East Texas Field, could limit the appellee to one barrel of oil daily on some actual or presumed finding of necessity or expediency; and the appellee could get no relief whatever in the courts or elsewhere, although the appellee could show, as here, that as to it the order is discriminatory, confiscatory and arbitrary, and that it is not necessary to issue such an order for the prevention of waste. Such an untenable contention as this is convincing proof of the absolute necessity that the courts perform their judicial function of reviewing and setting aside Railroad Commission orders that violate the due process and equal protection clauses of the Fourteenth Amendment.

[21]Mr. John Dickinson used the following language in his paper, *Judicial Review of Administrative Determinations, a Summary and Evaluation*, mentioned above:

"Finally, it is thought by many that on judicial review of

It is wholly abhorrent to American institutions for the citizen, who is the victim of confiscation and discrimination, to be left without a remedy in the federal courts by a rule which renders the trial courts helpless in cases where conflicts in evidence exist, much less in cases where conflicts do not actually exist if

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administrative determinations of fact, the substantial evidence rule, as at present formulated and applied, does not allow the courts sufficient scope to correct certain kinds of administrative errors and injustices. The suggestion is that if the rule as to review of constitutional facts laid down in the St. Joseph Stock Yards case were applied to questions of fact generally, ample freedom for the legitimate exercise of administrative discretion would still be preserved, and at the same time the door would be closed against types of administrative arbitrariness which escape the operation of the substantial evidence rule. *In the light of experience, there can be no doubt that where an administrative agency sets out to achieve a certain result, it can usually introduce into the record some evidence which, if taken by itself and apart from other evidence, or which, if interpreted in the light of certain assumptions and theories, can be said to supply a basis for the conclusion reached, whereas if the evidence were considered as a whole, or if the assumptions and theories were subtracted, the conclusion in question would plainly appear to be without sufficient foundation.* 'It is no doubt possible that under the substantial evidence rule, courageously applied, these errors might be corrected, but it is also true that the tendency and effect of that rule is frequently to discourage courts from going far enough to supply the needed correction. As already seen, the rule of the St. Joseph case vests the administrative determination with ample presumptive validity, attaches force and consequence to the mere fact that the administrative agency decided as it did, but lays on the court a mandate to reverse, if, after making all such allowances, it still concludes that the administrative determination must be regarded as clearly wrong. The issue would appear to be one mainly, if not solely, of emphasis, but the difference in emphasis is in practice apt to be sufficiently great to be determining; *with the result that if the substantial evidence rule is not to be perverted into a cloak for ratifying administrative error,* no harm would result from reformulating it into the rule of the St. Joseph case, and thereby permitting the court to reverse a fact determination which after due allowance for the presumption of validity, it concludes on all the evidence is clearly wrong.'' (Italics ours.)

the whole evidence be understood and the credibility of witnesses be passed upon. If such be the rule, it is contrary to the cases heretofore decided by this Court, as we have shown. The protection afforded to property rights, no less than that afforded to personal rights, by the due process and equal protection clauses of the Fourteenth Amendment should not be so lightly cast aside.

There is, indeed, substance in the assertion that the adoption of the substantial evidence rule where constitutional rights of either persons or property are concerned would tend "to be perverted into a cloak for ratifying administrative error." This Court must have had somewhat the same viewpoint, for the rule was rejected in the *St. Joseph* case, and later in the *Consolidated Gas* case where the point once more was squarely at issue. There was no difference of opinion expressed in the latter case.

If this Court, as appellants request, is to undo what it has done, and now announce the substantial evidence rule in this, a case similar to those where such rule has been rejected; or if this Court, as the brief in behalf of appellant Sadler suggests, goes so far as to hold that invalidity of an order of an administrative board, even where constitutional questions are involved, must be *conclusively* shown, or that mere conflict in the evidence forces the courts to uphold the order—then surely this Court will carefully examine the record as a whole before saying that there is as much as a scintilla of evidence, much less any substantial evidence, to support presumed findings by the Commission on fact issues necessary to support

the orders here involved. Surely this Court will give great weight to the findings by the trial court, and to the declaration of that court that there is no conflict in the evidence, and that there is no substantial evidence to support findings *contrary* to those made by the trial court.

b. *Under the Texas Statutes.*

In view of the opinion of this Court on motion for rehearing in the *Rowan & Nichols* case, affirming the long established rule that the federal courts may properly decide questions arising under a state statute when jurisdiction was obtained because of the existence of a federal question, as well as when obtained because of diversity of citizenship, there is here involved the question whether the orders of the Commission are valid under the Texas statute which requires that production be allocated "on a reasonable basis." Such point was at issue in this action, and the trial court, both in findings of fact and in conclusions of law, declared the allocation of production to be void as to appellee because contrary to the provision of the statute. (R. 567, 587, 588.) It becomes necessary, therefore, to discuss the meaning of the Texas statute, for in the opinion on rehearing in the *Rowan & Nichols* case the Court said in substance that no case had been called to its attention holding that the test as to reasonableness under the Texas statute was any different from, or less strict than, the test applicable to the claim that the order was confiscatory or discriminatory, in violation of the Fourteenth

Amendment. This Court also raised the question "Whether the local courts may exercise an independent judgment on what is 'reasonable'." 61 S. Ct. 66.

Appellee asserts that the test of whether an order is reasonable under the Texas statute is different from the test of whether it is confiscatory and discriminatory, in violation of the Fourteenth Amendment, and that the Texas Courts have in effect so held in a case which will shortly be discussed.

Further, appellee asserts that the Texas statute relating to conservation merely places the burden of proof upon a person attacking such an order, and does not impose upon him the burden of showing unreasonableness or invalidity on any other ground beyond a reasonable doubt, or by evidence that is not conflicting, or even by the great preponderance of the evidence.

(1) History and Meaning of "On a Reasonable Basis."

The first Act which specifically authorized limitation of the allowable for an entire pool and provided for proration of that allowable was passed in 1931. The pertinent part of that Act read as follows:

> "* * * such order shall be made in such manner as to distribute, prorate or otherwise apportion such production or adjustment among the wells committing such waste or contributing thereto as the facts justly and equitably require." *Acts of Texas* 1931, 1st Called Sess. sec. 7, c. 26, p. 46.

About a year later, the Conservation Act was amended and for the first time the language "on a reason-

able basis" appears. The applicable portion of that Act read as follows:

> "* * * the Commission shall distribute, prorate, or otherwise apportion or allocate, the allowable production among the various producers on a reasonable basis." *Acts of Texas,* 1932, c. 2, sec. 5, p. 3.

In the Act of 1935 relating to oil and gas, which Act is still in force, the exact language just quoted was reenacted. *Acts of Texas,* 1935, c. 76, sec. 6, p. 180.

It is reasonably certain that the legislature, by using the language "on a reasonable basis," had in mind the provisions of earlier statutes relating to orders of the Railroad Commission of Texas applicable to railroads, as well as to the interpretation given to those statutes by the Supreme Court of Texas. The Act of 1891, which authorized the Railroad Commission of Texas to regulate railroads, provided for judicial tests of the validity of orders of the Commission. A portion of this statute became Article 4566 of the Revised Civil Statutes of ~~1925~~ 1895, reading in part as follows:

> "* * * the burden of proof shall rest upon the plaintiff who must show that the * * * act or charges complained of are *unreasonable* and unjust to it or them." (Italics ours.)

Not very long after the statute as to railroads was passed, a case reached the Supreme Court of Texas, where the issue was squarely presented whether an order of the Commission could be unreasonable unless it was also confiscatory. The Court in *Railroad Com-*

mission of Texas v. Houston and Texas Central Railway Company, 90 Tex. 340, 353 (1897), held that the legislature intended by the use of the word "unreasonable" to give the courts the right to declare an order void as being unreasonable whether or not it was at the same time confiscatory. The following language appears in that opinion:

> "We know of no decision of any court which has defined either 'unreasonable' or 'unjust' to mean that the act so characterized is the taking of properety without proper compensation or without proper compensation or without due process of law. It is true that the courts have established the rule that the reasonableness and justice of rates fixed by the legislature, or by a commission empowered by it so to do, are ordinarily questions committed to the discretion of those bodies, and not subject to revision by the courts, but in such cases the law did not authorize any revision of such action by the judicial department. It has been generally held, especially by the Supreme Court of the United States, that the action of the legislature of a State or of a commission created by it, in fixing rates of transportation, would be revised and would be set aside and annulled, when it violates the constitutional right of the carrier to that degree that it amounts to a taking of property without proper compensation or without due process of law. But in doing so, the courts have not revised the exercise of discretionary power on the part of the legislature or the commmission, but it is an interference on the part of the judiciary to protect parties against a violation of the Constitution of the United States or of the State, whether it be in making or enforcing the law. It has not been held that every rate, rule or regulation which does not violate the

Constitution is reasonable, but that extreme degree of unreasonableness which confiscates property gives jurisdiction to the court. If our statut(has not changed the law, the same test must be applied in this case.

* * *

"The test to be applied to every such decision is, that it shall not be unreasonable or unjust to such railroad company or other person complaining. The great number of subjects to which this action may apply, and the fact that it may embrace all or any one of them, and may be instituted by any person interested, for any cause which will show it to be unreasonable, manifests an intention on the part of the legislature to establish a much more liberal rule than previously existed upon this subject. The decision made in establishing rates, classifications, rule, charge, orders or other regulation, *might frequently be unreasonable and unjust, and yet might not amount to the taking of property without proper compensation, or without due process of law.* Indeed, as to some persons who might be affected, and in the performance of some of the acts enumerated, the property would not be taken at all, and therefore the test which the Attorney General would apply could not be applicable." (Italics ours.)

The case just cited and the rule announced therein have not been modified on the point under discussion. What was said in the quotation above was reaffirmed, with the point at issue, in two later cases by the Supreme Court. *Railroad Commission of Texas v. Weld & Neville,* 96 Tex. 394, 403 (1903), and *Gulf, Colorado & Santa Fe Railway Company v. Railroad Commission of Texas,* 102 Tex. 338, 353 (1908).

It has been accepted as settled in Texas that under

the railroad statute the Commission is restricted in its powers beyond the restriction which is imposed by the Fourteenth Amendment; and it is also settled that the courts have greater freedom in striking down an order as being unreasonable than they would have to strike down an order as being confiscatory.

In the light of the history of the statute as to railroads, including the burden-of-proof provision which will shortly be discussed, it is reasonable to presume that the statute as to railroads, including judicial interpretation thereof, was the model for the provision in the statutes as to allocation of oil production where the Commission was directed to allocate production "on a reasonable basis." Although no appellate court in Texas has decided a case involving allocation of oil in a field in which the meaning of the language "on a reasonable basis" was directly involved, it has been decided, as pointed out in part II, p. 34 of this brief, that an order of the Commission must respect property rights; and it is submitted that no order is reasonable which fails to protect property rights, and that allocation is not "on a reasonable basis" which is unreasonably discriminatory and arbitrary, whether or not it results in actual confiscation.

(2) History and Meaning of Provision as to Burden of Proof.

The first provision for a court review of orders promulgated under the conservation statutes was passed in 1929, the last sentence of which read as follows:

> "In all trials under this section the burden of proof shall rest upon the plaintiff." (Acts of 1929, c. 313, sec. 6, p. 694.)

The phraseology was changed slightly in 1931 and 1932. Acts 1931, 1st Called Sess., sec. 8, c. 26, p. 46; Acts 1932, 4th Called Sess., Sec. 8, c. 2, p. 3. In the 1935 act there was a provision with respect to burden of proof which is still in force, reading as follows:

> "In all such trials, the burden of proof shall be upon the party complaining of such laws, rule, regulation or order; and such laws, rule, regulation or order so complained of shall be deemed prima facie valid." (Acts 1935, c. 76, Sec. 14, p. 180.)

Let us now trace the obvious history of the provision as to burden of proof in oil-conservation cases.

The burden-of-proof statute in oil-conservation cases was evidently modeled upon an earlier statute relating to orders of the Railroad Commission of Texas involving railroads. The legislature not only had the railroad statutes before it, but also the legislative and judicial history of those statutes which will now be sketched. The Revised Civil Statutes of 1895 contained Article 4566, which read as follows:

> "In all trials under the foregoing authority, the burden of proof shall rest upon the plaintiff who must show by *clear and satisfactory evidence* that the rates, regulations, order, classification, act or charges complained of are unreasonable and unjust to it or them." (Italics ours.)

The courts held that the use of the language "clear and satisfactory evidence" imposed a very heavy

burden on the plaintiff, virtually requiring him to show conclusively or beyond a reasonable doubt that the order of the Railroad Commission was unreasonable. *Railroad Commission of Texas v. Galveston Chamber of Commerce,* 105 Tex. 101, 115 (1912). The burden so imposed was so great that the legislature in 1925 amended the burden of proof statute by eliminating the words "clear and satisfactory evidence." The amended provision appeared as Article 6454 of the Revised Civil Statutes of 1925, which is still in force, and which reads as follows:

> "The burden of proof shall rest upon the plaintiff to show the rates, regulation, order, classification, act or charges complained of are unreasonable and unjust as to it or them."

The effect of the amendment of the statute was directly involved in the case of *Railroad Commission of Texas v. Houston Chamber of Commerce,* 124 Tex. 375 (1935). In that case, the Commission of Appeals, in an opinion adopted by the Supreme Court, said:

> "On the question of burden of proof required by statute, when an order of the Railroad Commission is attacked directly, the statute (Art. 6454, Rev. Stat., 1925) now reads: 'The burden of proof shall rest upon the plaintiff to show the rules, regulations, orders, classifications, acts or charges complained of are unreasonable and unjust to it or them.'
>
> "The codifiers of the 1925 revision left unchanged Article 6658 of the Rev. Stat., 1911 (which in turn was Article 4566 of the Rev. Stat., (1895) on the subject, except the omission after the word 'show' of the words 'by clear and un-

satisfactory evidence;' *under the statute now in force the controversy must therefore be determined, so far as the 'burden of proof' is concerned, by the same rules governing ordinary civil cases.*" (Italics ours.)

The case under discussion has not been overruled or modified with respect to the holding as to the burden of proof.

The provisions of the statutes with respect to oil and gas conservation orders, merely providing that the orders are prima facie valid, and that the burden of proof is on the plaintiff, were all passed after the legislature in 1925 had changed the railroad statute, thereby restricting the powers of the Railroad Commission of Texas, and thereby giving greater freedom to the courts in annulling orders of that Commission. It is quite significant that the statute as to burden of proof in conservation cases which is now in force was passed in April, 1935, about three months after the decision by the Supreme Court of Texas in the *Houston Chamber of Commerce* case. This was in January, 1935, while the legislature was in session. It is not fanciful to insist that the legislature had in mind the unsatisfactory experience under the old railroad statute providing for judicial review of orders of the Railroad Commission of Texas; and that it was fully cognizant of the enormous power given under the original statutes to the Commission by making its orders almost free from court review, by reason of the extraordinary burden of proof which was imposed upon a person attacking the validity of its or-

ders. It is almost a certainty that the legislature, having before it the history of litigation in railroad cases, and by writing the burden-of-proof provision and the reasonable-basis provisions in the oil-conservation statutes, intended to *restrict* and *limit* the *Commission* and to *give greater freedom to the courts,* to the end that a person who was affected by the orders of the Commission would have protection by court review which would be more than a mere formality.[22]

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[22]In footnote No. 2, on page 29, of their brief, appellants referred to the case of Gulf Land Co. v. Atlantic Refining Co., and quote certain language with reference to the function of the court in reviewing an order of the Railroad Commission of Texas, indicating that the court will consider only whether the action of the Commission is reasonably supported by substantial evidence. That case involved the validity of a permit issued by the Commission as an exception to its spacing Rule 37, and did not involve allocation of production. There was no dispute as to the facts; and the court held, as a matter of law, that the permit granted was invalid. The quotation referred to was purely an ill considered dictum. The only citation is "34 Tex. Jur., p. 712, sec. 11, and authorities there cited." The section of Texas Jurisprudence cited by the Supreme Court relates to railroads and public utilities, not the oil-conservation statutes; and the text is largely supported by cases decided under the old railroad statute which existed prior to the amendment in 1925. The cases simply are not in point. Moreover, in considering Rule 37 cases, there is no statutory requirement as to reasonableness as there is in a case, such as the case at bar, involving the validity of an order allocating production.

The Supreme Court of Texas has never decided an oil-proration case, and has never been called upon to decide the effect of the reasonable-basis provision or the burden of proof cast on a plaintiff in a case involving allocation of the allowable for a field. In the Brown case, which involved the validity of a well-drilling permit, the court by language considered to be dicta, not supported by citations, said that an order of the Commission granting or denying a permit to drill a well should not be set aside unless "clearly illegal, unreasonable, or arbitrary."

In another case, also a well-permit case, it would appear from language likewise considered dicta that no extraordinary burden

The Texas statutes relating to conservation of oil and gas not only mean that the Commission is not authorized to allocate production on an unreasonable basis, whether or not confiscation takes place by the method of allocation; but they also mean that the person attacking the validity of an order is entitled to a real judicial review. The statutes mean that the case involving the validity of an order of the Commission under the conservation statutes must be tried as any other civil action; and although the order is *prima facie* valid and the burden of proof is upon the plaintiff, the burden which exists is no more than that which exists in an ordinary suit between private persons. Under the Texas statute, therefore, it is the function of the Court to resolve the conflicts, if any, in the evidence, and to make "an independent determination on what is reasonable"; but the Court should, of course, impose upon plaintiff the statutory burden of proof, and should not undertake to write a proration order for the Commission. *Brown v. Humble Oil & Refining Company,* 126 Tex. 296, 316. The Court should make its own findings upon the evidence adduced at the trial; and these findings, if supported by substantial evidence, should be upheld by an appellate court.

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of proof was required before a court should set aside an order. Railroad Commission v. Magnolia Petroleum Co., 130 Tex. 484, 491 (1937).

In all three cases referred to, the Supreme Court of Texas held that there was no dispute as to the facts or that as a matter of law no permit should have been issued. It follows that the meaning of the burden-of-proof statute was not involved in any one of them, nor was the meaning of the language "on a reasonable basis" involved.

3. Findings By Trial Court Fully Supported By Evidence.

Should the Court take the view that there is conflict in the evidence on some of the issues, the trial court performed its judicial function under the Fourteenth Amendment and under the Texas statute of resolving such conflicts. The trial court admittedly had jurisdiction because of the existence of the Federal questions involved; and having once taken jurisdiction, it had the right to decide all issues involved, whether they arose under the Fourteenth Amendment or under the State statute. Since the findings of the Court are fully sustained by the evidence, it appears that the judgment should be affirmed.

V.

The evidence in this case clearly shows that the orders complained of as to appellee are discriminatory and confiscatory, in violation of the due process and equal protection clauses of the Fourteenth Amendment, and are unreasonable, in violation of the Texas statute. In view of the restricted field allowable, the large number of wells, the varying densities to which wells are drilled, the striking variances in the amounts of oil in place under the several properties, and the longer life of most leases in the eastern portion as compared with the life of leases in the rest of the field, the use of the base allowable of twenty barrels necessarily renders the orders complained of discriminatory, confiscatory and unreasonable as to appellee, is wholly arbitrary and unnecessary, and

bears no substantial relation to the prevention of physical waste.

From what has been said in parts III and IV of this argument, we believe it appears that the judgment below should be affirmed. But in all events, a careful consideration of the physical facts in the field, the extent and location of appellee's properties, the amount of oil it has in place in the field, the effect of the orders complained of upon appellee, a study of the maps and exhibits offered, and of the testimony of the witnesses, both on direct and cross examination, and a consideration of the record as a whole, will show in a convincing way that the orders complained of as to appellee discriminate against it, take its property without compensation and are wholly arbitrary and unreasonable. Viewing the record as a whole, there is no room for reasonable doubt and no basis upon which reasonable minds could differ as to the discriminatory, confiscatory and unreasonable character of the orders complained of. An examination of the whole record will likewise show that the method of allocation complained of bears no reasonable relation to the prevention of physical waste. We shall now make a somewhat detailed examination of the essential findings of the court and of the evidence sustaining them in order to demonstrate the correctness of the statements just made.

1. Appellee's Property—Its Oil In Place.

The trial court found that when the field was dis-

covered appellee owned 14.3% of the acre-feet of net effective oil sand, and that it still had under its leases at the time of trial at least 14.3% of the remaining recoverable oil in the field. (R. 577-578.) The average thickness of the net effective oil sand under appellee's leases was originally 48.29 feet, while the average thickness under the field as a whole was 38.78 feet. (R. 577.) This accounts for the fact that appellee's percentage of the oil in place is in excess of its percentage of the surface acreage in the field. Appellants do not deny that appellee is the owner of the oil in place under its leases, and do not deny that it is entitled to a reasonable opportunity to produce it.

The above findings are established by the uncontradicted testimony of Mr. Sorenson (R. 80-81), and of Mr. Moore (R. 132.) Their testimony concerning appellee's percentage of the original acre-feet of net effective oil sand in the field is borne out by the Commission's isopach or sand-thickness map introduced in evidence by the appellee as its Exhibit No. 4 (offered, R. 77), the original of which accompanies the record. It is significant that while the appellants had their own Chief Engineer, Dr. Patten, and two other witnesses on the stand, they did not in any way challenge or seek to disprove the testimony of Mr. Sorenson and Mr. Moore to the effect that appellee has under its leases 14.3% of the oil in place. Their testimony is undisputed in the record.

2. Effect Of Orders Upon Appellee.

The trial court found that in the past appellee has

been permitted to produce only about 9.6% of the accumulated field allowable, or only about 11/15 as much oil per acre foot of the oil sand depleted as the field as a whole has been permitted to produce per acre-foot of oil sand depleted. (R. 578.) Under the June 19 order, appellee was permitted to produce only 9.932% of the field allowable. (R. 580.) Its allowable should have been at least 44% higher than it was under the June order. (R. 580, 581.) This amounts to about 22,800 barrels per day. Under the September and January orders, appellee was permitted to produce only about 11.17% of the field allowable. Considering oil in place and position of appellee's leases on structure, appellee is currently deprived of opportunity to produce 3.13% of the field allowable. (R. 583.) This amounted to some 29% of its scheduled allowable, or 21,600 barrels per day less than its fair share. (R. 143, 583.)

These findings are supported by the testimony of Mr. Moore (R. 142-144) and his testimony is not disputed in the record.[23]

3. The Evidence Shows The Orders Are Discriminatory And Confiscatory.

a. *Evidence Showing Discrimination.*

According to the court's findings, the orders complained of do not afford equal protection of the laws,

[23]The statement of appellants on page 52 of their brief that appellee is complaining only because it is not getting its fair share "of the increase in the production resulting from regulation" is not a correct statement. Appellee is entitled to produce its fair share of all the oil produced from the field.

being highly discriminatory against appellee and in favor of other operators in the field, without justification. (R. 582, 585.) The orders *uniformly* discriminate (1) in favor of densely drilled tracts *in all parts of the field* against adjacent tracts less densely drilled, and (2) in favor of tracts having small reserves and the thin sand areas as against tracts having far greater reserves and areas where the sand is thick. The record is replete with evidence showing in a striking, almost startling, way how the orders complained of discriminate against appellee and favor other operators in the field.

(1) *Discrimination is shown in several of the appellee's exhibits offered in evidence.* Particular reference is made to appellee's Exhibit 14 (R. 503, offered R. 153), 15 (R. 504, offered R. 153), 16 (R. 507, offered R. 153), 17 (R. 508, offered R. 154), and 18 (R. 509, offered R. 155). Exhibits 14, 15 and 16 show how the orders complained of discriminate against leases in any part of the field where wells are widely spaced as compared with neighboring leases where the wells are densely drilled. Exhibits 17 and 18 show that the allowable production allocated to wells on thin sands, as compared with the allowable production allocated to wells on thick sands, discriminates in favor of the former and against the latter, and further illustrate how the orders in fact give the east side properties as much production in proportion to acre-feet of oil in place as they give to the west side properties, contrary to the Commission's representation that these orders take care of the time element by al-

lowing the west side to produce at a faster rate tha
the east side in proportion to oil in place. These e
hibits are summarized on pages 151 to 155 of th
record.

On the basis of comparative allowables per day pe
100 acre-feet of net oil sand, it is shown that other o
erators are permitted to produce from 3.6 to 24.1 time
more than appellee in Exhibit 14, from 1.3 to 35 time
more than appellee in Exhibit 15, and from 3 to 1
times more than appellee in Exhibit 16. Exhibits 1
and 18 show that comparing wells on approximatel
5-acre tracts, the allowable production per day pe
100 acre-feet of sand to wells on the west and eas
sides of the field is about 5 times greater than t
wells in the fairway. This same fact is graphicall
shown on appellees' Exhibit 19 (offered R. 157), th
original of which has been forwarded with the record
A glance at Exhibit 19 will show that the allowable
per 100 acre-feet of sand per day are in inverse rati
to the sand thickness and the oil in place, and tha
high allowables are given to operators who have thi
sands and very little oil, while relatively low allowable
are given to operators who have thick sands and grea
quantities of oil in place. This disadvantage in favo
of operators in the fairway is much more strikin
when compared with the allowables given to well
drilled to a greater density than 5 acres per well i
the east and west portions of the field.

Appellee's Exhibits Nos. 20 and 21 (offered R
160), 22 and 23 (offered R. 161), and 24 and 25 (of
fered R. 162) also will show at a glance how the or
ders discriminate against the appellee and in favor o

other operators. The originals of these exhibits were forwarded with the record. The inequalities in the instances shown are almost fantastic. (R. 160-162.) For example, Exhibit 23 shows that appellees' Peterson lease will be permitted to recover in comparison, with the Hamilton Smith-Culp lease in the ratio of 8.35 to 4910.

(2) *The discriminatory effect of the orders is further shown in a striking manner when the allowable for one 5-acre tract with one well is compared with the allowable of another 5-acre tract adjoining with five wells on it.* Under the September and January orders, a 5-acre tract with five wells on it on the west side of the field will be allowed five times as much production as an adjoining 5-acre tract with one well on it. (R. 157, 584.) A 5-acre tract with five wells on it in the fairway will be permitted to produce three times as much as an adjoining 5-acre tract with one well on it. (R. 158, 584.) A 5-acre tract with five wells on it in the east side of the field will be permitted to produce five times as much as an adjoining 5-acre tract with one well on it. (R. 158, 159, 584.)

(3) *The discrimination is again vividly shown when the following table is studied showing that the Commission has permitted operators to drill several wells on each of hundreds of small tracts, and by the use of the 20-barrel base allowable, has given to such tracts a disproportionately large share of the field allowable.* An analysis of appellee's Exhibit No. 16 (R. 507, offered R. 153) shows:

159 tracts (individual acreage between .01 and .40), totaling 98.12 acres, have 448 wells—an average of almost 3 wells per tract.

169 tracts (individual acreage between .50 and .99), totaling 318.5 acres, have 436 wells—an average of between 2½ and 3 wells per tract.

236 tracts (individual acreage between 1.00 and 1.49), totaling 751.45 acres, have 631 wells—an average of almost 3 wells per tract.

271 tracts (individual acreage between 1.50 and 2), totaling 1,466.46 acres, have 829 wells—an average of between 2½ and 3 wells per tract.

Thus the 835 tracts embracing only 2634 acres have 2344 wells, or about one well per acre. Compare this with the appellee's 2547 wells (R. 82) on 14,656 acres (R. 79), or one well to 5.8 acres, such wells being adequate to produce the oil in place efficiently and without waste. (R. 146, 585.) These small tracts, embracing only 2634 acres, are permitted to produce two-thirds as much oil per day as appellee is permitted to produce from its 14,656 acres.

These small tracts have 1509 wells more than one well per tract; and, solely because they have these additional wells on them, the tracts are permitted to produce 30,180 barrels daily through operation of the 20-barrel base allowable alone. This amounts to 4.36% of the field allowable, which of itself is more than would be required under the September and January orders to enable appellee currently to produce its fair share; for appellee would need only an additional 3.13% of the field allowable, or 21,600 barrels per day, under the September and January orders, in order to receive its fair share.

The Court should bear in mind that the 835 tracts above mentioned *are only those tracts having less than two acres each.* Moreover, there are a great number of other small tracts, having more than two acres each,

as well as many large tracts, which have been very densely drilled. (Appellants' Exhibit 10, R. 550, offered 363.) The enormous allocation given to wells on these groups of densely drilled tracts, be they large or small, explains in large measure why appellee's leases suffer avoidable and unnecessary drainage under the orders complained of. The statement in appellants' brief, page 64, that the densely drilled tracts have "very little influence on the allowables granted to other wells because there are so few wells drilled on small tracts" is wholly and obviously incorrect.

(4) *The discrimination shown takes place all over the field; that is, it takes place in the western portion, in the fairway, and in the eastern portion.* Discrimination must inevitably result from the use of the 20-barrel per well base allowable because of the arbitrary variances in the densities to which tracts are drilled throughout the field (R. 144, 579, 583, 584),[24] and because of the sharp variations in the amount of oil in place under a given number of acres in the west third or east third of the field, as compared with the fairway. (R. 144, 156, 583, 584.) This discrimination is further accentuated by the fact that oil is being driven up-structure from the west and across the fairway to the east third of the field. (R. 91, 113, 163, 584.) This process has been going on for about nine years and will continue to go on (R. 391), because the eastern portion of the field is some 40 to 80 feet higher

[24]See original maps of the East Texas Field, appellee's Exhibits Nos. 1 (offered R. 74), 2 (offered R. 75), 3 (offered R. 76) and 4 (offered R. 77). They will give a good idea of the varying densities to which wells are drilled all over the field.

than the highest point in the fairway (R. 416), and 180 feet higher than the west side. (R. 393.)

It is the sum total of the discriminations shown that results in the over-all discrimination against appellee. These discriminations also inevitably result in the confiscation which appellee suffers.

b. *Evidence Showing Confiscation.*

The trial court found:

> "The program of regulation outlined above (that represented by the orders complained of) results in the taking of plaintiff's property and giving it to others without any compensation and without any reasonable necessity. Plaintiff is deprived of a reasonable opportunity to produce currently a very substantial quantity of oil which it would be entitled to produce under a proper method of regulation. The loss to plaintiff under such a program amounts to a very large figure daily and will probably amount to an enormous figure over a period of years if the program be continued." (R. 586, 587.)

The Court further found that if appellee were permitted to drill additional wells on its property, and if it were to do so, it would be mere speculation, to say that the allowable would be materially increased, for it is reasonably certain that other operators would likewise be given permits to drill, and the result would be nothing more than further useless expenditure for wells with little or no relative change in the distribution of the allowable so far as appellee is concerned. The Court further found that since appellee already has enough wells to produce efficiently its oil, confiscation would result in the event it be required to drill

additional wells as a prerequisite to obtaining its proper allowable. The Court, therefore, concluded that the orders complained of as to appellee do not apportion or distribute the allowable production for the field on a reasonable basis, and are arbitrary, confiscatory, discriminatory and unreasonable, and deny to appellee a reasonable opportunity to recover its fair share of the oil ultimately, much less within a reasonable time, resulting in a daily loss of many thousand barrels of oil worth many thousand dollars. (R. 587.) The Court further found that it was not necessary to prescribe and enforce such a program of regulation against appellee in order to prevent physical waste of oil or gas, or for any other reason. (R. 589.)

(1) *That appellee's leases have suffered severe drainage under orders in effect in the past is shown by the undisputed testimony of both Sorenson and Moore.* Orders employing the principle of proration applied in the June 19 order were in effect for the field for about six years. (R. 387, 388.) The undisputed testimony shows that while appellee at all times had 14.3% of the oil in place (R. 81, 83, 85, 102, 132, 133), it was permitted to produce only 9.6% of the accumulated field allowable. (R. 132.) Mr. Moore testified that considering the extent to which appellee's properties had been depleted in comparison with the amount of oil it had been permitted to produce, appellee has suffered a net drainage of about 64,000,000 barrels. (R. 133, 136, 137.) He further showed that other leases in the field had been permitted to recover

about 40% more per acre-foot than had appellee's properties. (R. 190.) Sorenson showed that on one basis of calculation appellee's properties had suffered a net drainage of about 56,000,000 barrels, by reason of the fact that other properties in the field had been permitted to recover at a much more rapid rate per acre-foot of oil sand depleted than had appellee. (R. 334.)

It is significant that the appellants' witnesses made no effort to refute this testimony, although appellants' expert witnesses were fully acquainted with the field and its producing history, and presumably with appellee's properties.[25]

The consideration of what took place in the past is important primarily because it shows as a matter of history how the kind of orders complained of worked to the disadvantage of appellee. From past experience, we are justified in drawing a conclusion as to what may happen in the future under orders of similar effect.

(2) *The fact that appellee is suffering present injury under the orders complained of "is clear, practically admitted," according to the trial court.* (R. 565.) The record is clear that appellee presently owns 14.3% of the oil in place. (R. 83, 84, 132.) Appellants offered no witnesses to refute this fact. Furthermore, the record shows that appellee's leases are located all over the field and occupy an average or representative position. (R. 85, 102, 133, 165.) See orig-

[25]In August, 1939, appellee furnished the Commission with full information concerning the number of acre-feet of oil sand under each of its leases in the field. (R. 123.)

inab maps of the field introduced in evidence, appellee's Exhibits Nos. 1 (offered, R. 74), 2 (offered, R. 75), 3 (offered, R. 76) and 4 (offered, R. 77). As we have shown, it is unable currently to obtain its fair share of the oil unless it is permitted to produce approximately in proportion to its oil in place. This is because of the average position occupied in the field by its leases. A fuller discussion of this fact is found on pages 46, 47, and footnote 12.

Under the June order appellee was permitted to produce only 9.932% of the current allowable, while under the September and January orders it was permitted to produce only 11.17% thereof. (R. 142, 143, 582.) It lacked about 22,800 barrels per day of producing its fair share under the June order, and about 21,600 barrels per day of producing its fair share under the September and January orders. (R. 143.) *The Commission's order of September* 11, 1939 (appellee's Exhibit 8, R. 473, 474; offered, 138), *recites that, in order for each producing well to be allowed to produce its fair share of the allowable, and in order to prevent waste, the method of allocation used must incorporate the factors of potential, acre-feet of oil sand, and bottom-hole pressure.* The June order for the East Texas Field does not incorporate any of these factors, except that potential is used in allocating about 2% of the field allowable among wells (Admitted, appellants' brief, pages 32, 35); and the same is true of the order now in effect. Ninety-eight per cent of the allowable is allocated on an arbitrary per-well basis. *It follows that, according to the Commission's own findings, the*

order of June 19 and the current order are necessarily arbitrary and do not make a proper allocation among properties in the field, and are not designed to prevent physical waste.

(3) *Likewise, the finding of the trial court that the orders complained of if continued in effect will cause appellee to suffer confiscation in the future, is fully borne out by the record.* Moore testified that if orders similar to the September and January orders were continued in effect during the remaining life of the field, appellee would lose between 45,000,000 and 85,000,000 barrels of oil by drainage from its leases to other properties in the field. (R. 145.) He further testified that his estimates were based upon actual calculations which he believed to be correct.[26] (R. 145.) Hudnall admitted that reliable estimates of this kind could be made, and that he had not made them. (R. 418.) Most of appellee's leases are in the west half of the field and in the fairway; the eastern portion of the field being 40 to 80 feet higher than the highest point in the fairway (R. 416), should be the last to quit producing. (R. 113, 114, 130, 131, 163,

[26]From Moore's testimony (R. 194)it clearly appears that he did not estimate appellee's future losses by drainage on the basis stated by appellants on page 45 of their brief. The subtractions of 11.17% of estimated future recovery from 14.3% thereof would indicate 100,000,000 barrels loss by drainage from appellee's properties. Mr. Moore testified that he made detailed calculations in arriving at the estimate of from 45,000,000 to 85,000,000 barrels net loss by drainage from appellee's leases, and that some leases would recover less than the oil in place, while others would recover more. (R. 145, 206, 207.) In making these calculations, he necessarily had to consider each lease separately, its position on structure, the effect of water encroachment, drilling density, and the time factor.

186, 195, 206.) . The water drive will continue to push the oil from the west and the fairway to the east. (R. 91, 391, 576.) Appellee's leases in the east half of the field being much less densely drilled on the average than leases of other operators in that portion of the field, a 75% or 98% per-well order would necessarily cause drainage from appellee's properties. (R. 163.) The pressures in the eastern portion of the field, other than the portion having tight sands, have been substantially maintained. (R. 347, 380.) Only a small strip of about 500 feet wide along the eastern side has tight sands. (R. 113, 114, 128, 206, 417.) This is a very insignificant portion of the field. Appellants admit in footnote No. 29 on page 60 of their brief that to a certain extent the leases located in the eastern portion of the field where sands are thick and permeable have a structural advantage. They argue for a structural advantage when it will benefit the east side but against it when they say it will benefit the fairway. It is undisputed that under the orders complained of in proportion to reserves in place, the east side will get the lion's share of production. (R. 163.) *The maintenance of a disproportionately high production for the extreme eastern portion of the field tends to cause waste by tending to lower pressures.* (R. 380, 381, 382.)

Furthermore, as we have pointed out, the high per-well allowable to wells on densely drilled tracts with small quantities of oil in place makes it impossible, in view of the restricted field allowable, for appellee's wells to receive sufficient allowable to enable appellee

to recover appellee's fair share either currently or ultimately.

(4) *The Court found that appellee has drilled on its properties more than enough wells to enable it to produce its fair share of the oil without waste.* (R. 565.) This finding is not challenged by an assignment of error or by testimony. The record shows that one well will effectually drain 10 acres in the East Texas Field, except, perhaps, in the narrow strip on the east side where the sands are tight. (R. 177, 178, 264.) Appellee has drilled its properties down to an average density of 5.8 acres per well (R. 85) and has drilled sufficient wells on each of its leases to recover the oil thereon without waste. (R. 146.) Appellants suggest on page 66 of their brief that appellee should drill more wells if it desires to obtain more production.[27] The court found (R. 585) and the record

[27] Appellants' brief, p. 66, footnote 34, asserts that waste would be prevented if appellee would drill more wellls, citing a statement by Hudnall. (R. 415, 416.) Hudnall admitted that his statement was based on the assumption that "the more wells you drill, the more oil you will get out." (R. 415.) Appellee's leases are already drilled to an average of 5.8 acres per well. (R. 585.) The restrictive provisions of the spacing rule are that wells shall be at least 660 feet from other wells and at least 330 feet from property lines (R. 551, offered R. 460), which contemplates not more than one well to ten acres. There is no suggestion in the record that reservoir conditions under appellee's leases are such as render the Commission's well spacing rule less applicable to appellee's leases than to the field generally. Clearly, Hudnall's assumption was on the theory that the restrictive provisions of the Commission's spacing rule are unwise in their general application, and that enforcement of the rule, in general, causes waste, and violation of the spacing rule, in general, prevents waste. The statutory basis for the well spacing rule is Articles 6014 and 6029, Vernon's Ann. Tex. Civ. Stats., 1925, empowering the Commission to adopt rules to prevent waste. Stanolind Oil and Gas Co. v. Midas Oil Co. et al., 123 S. W.

shows (R. 164) that if more wells were drilled there would be no certainty that appellee's position would improve. Furthermore, it costs about $10,000.00 to drill and equip a well in the East Texas Field. (R. 171, 585.) To require appellee to drill additional unnecessary wells would within itself be confiscatory. (R. 587.)

Thus, the past, present and future confiscatory ef-

(2d) 911, 915 (writ of error dismissed). In adopting the 660-330 foot spacing provisions for the field, the Commission expressly found that such restrictions are necessary to prevent waste. (R. 520, offered R. 467.) The spacing rule is not subject to collateral attack. Magnolia Petroleum Co v. Railroad Commission, 128 Tex. 189, 195, 93 S. W. (2d) 273. Hudnall's assumption on this point is a collateral attack on the wisdom of the spacing rule, and may not be considered. Railroad Commission v. Marathon Oil Co., 89 S. W. (2d) 517, 518 (writ of error refused); Atlantic Oil Production Co. v. Railroad Commission et al., 85 S. W. (2d) 655, 657 (writ dismissed). There are many other Texas authorities to the same effect. While the Commission once entered an order (R. 554, 557, offered R. 460) containing a recital that the Commission finds the more wells that are drilled, the greater will be the ultimate recovery, the Commission shortly thereafter issued two subsequent orders explaining that what it meant by the preceding statement was not that the closer wells are drilled, the greater will be the ultimate recovery, but only that the more wells that are drilled *in conformity with the spacing rules*, the greater will be the ultimate recovery. (R. 527, 536, offered R. 526, 535.)

The Commission denied permits to drill approximately 600 locations in the field as exceptions to the spacing rule, between January 1, 1938, and January 30, 1939. The Commission also denied 14 of appellee's applications for permits to drill additional wells on its properties in the field between September 21, 1938, and March 1, 1939. (Plaintiff's Exhibit 33, sent to this Court in its original form, offered R. 462, 463.) When such denials of permits are considered in connection with the fact that the Commission has granted numerous permits to drill several wells on many small tracts, it is obvious that the Commission is capricious in granting and denying permits in the field, and does not believe that such wells are necessary to prevent waste.

fect of the orders as to appellee has been clearly demonstrated.

4. Allowable of Twenty Barrels Per Well Arbitrary and Not Necessary.

The inherent and continuing vice in the orders, which inevitably leads to the discrimination, confiscation and unreasonableness complained of is the use of the base allowable of 20 barrels per well. As we have shown, it consumes 98% of the field allowable under the June order and the present order, and about 75% of the field allowable under the September and January orders. (R. 162, 580, 582.) In view of the restricted top allowable for the field, so much of the field allowable is consumed after the arbitrary 20-barrel allocation is made, that an insufficient quantity of proratable oil is left available for distribution among the better properties in the field to enable appellee to obtain its fair share of the oil. As Judge Sibley remarked from the bench, the 20-barrel allowable is the "snag in the stream." (R. 269.) The differences in the allowables for the various wells are not in any sense commensurate with the differences in potentials, pressures, acreage, sand thickness and oil in place with respect to the various tracts in the field. (R. 139, 141, 162, 379.)

The basic allowable of twenty barrels per day is given to each non-marginal well in the field regardless of the lack of uniformity in density of drilling all over the field. Because of this fact, the densely drilled tracts are favored over the less densely drilled

tracts similarly situated in all parts of the field. Densely drilled tracts must inevitably recover, oftentimes, far in excess of the equivalent of the oil in place under them, while many other tracts less densely drilled can never recover their fair share. Appellee's properties, although already having more wells than are needed to produce efficiently the oil in place (R. 146, 585), are less densely drilled on the basis of surface acreage (R. 85), and much less densely drilled on the basis of oil in place, than is the field as a whole. (R. 50, 185, 578, 585.) Its leases in the east half of the field, for example, are drilled to an average density of one well to 6.18 surface acres, while other operators in the east half of the field have drilled their leases to an average density of one well to 4.66 acres. (R. 163.) *While appellee owns* 14.3% *of the oil in place, it has only* 9.8% *of the wells in the field.* Hence, under the orders complained of, appellee is not permitted to take oil from its properties ratably with other operators. (R. 171.)

The use of the twenty-barrel base allowable per well per day is purely arbitrary.[28] (R. 583.) The Court stated:

> "We now hold that with the wide differences in well density and in well capacity that exists in the East Texas Field, an apportionment of three-fourths on a flat per well basis is not justified by good reason—is unreasonable." (R. 567.)

[28] Appellants state on page 51 of their brief that appellee has recommended a minimum allowable. This is incorrect. Appellee stated that it *would not object* to a reasonable minimum unit allowable. (R. 336.) An unreasonable basic *well-allowable* is quite a different thing.

It is allocated to each non-marginal well in the field simply because it is a well. (R. 139, 141, 580, 582.) It does not take into consideration the oil in place underlying the tract on which the wells are located as compared with the oil in place underlying other tracts. (R. 162, 379.) It does not take into consideration the acreage in one tract as compared with another or the difference in potential or pressures in the wells. (R. 162, 379.) It does not consider the time element or the position of wells on structure. (R. 162.) It gives to a well on the east side of the field exactly the same base allowable as it does to a well on the west side of the field or in the fairway, although the well on the east side of the field is on the highest part of the structure and will produce many years longer than will the wells on the west side of the field. (R. 114, 141, 163, 186, 195, 206.) It takes no account of the fact that, in order to produce his fair share of the oil, one operator must produce at a more rapid rate than another operator. It does not give consideration to the fact that an operator in the western portion of the field must produce his oil in a shorter time than an operator in the eastern part of the field if the former is to recover the oil in place, or its equivalent, under his lease; nor does it take into account the fact that one operator has thick sands and much oil in place while another operator has thin sands and little oil in place. Nor does it give one ounce of consideration to the fact that a well drilled on five acres in any part of the field must be permitted to produce more rapidly than a well drilled on an adjoining tract of 1/10 of an

acre if each is to be afforded a reasonable opportunity to recover the equivalent of the oil in place under the tract on which it is drilled. It brings the wells on the best property down to the level of the wells on the worst, and raises the wells on the worst property to the level of the best.

With respect to the June order, the Court found (R. 581):

> "Such allocation gave no separate consideration to acreage, sand thickness, bottom-hole pressure, position on structure, the number of acre-feet of oil sand in a lease, or the recoverable reserves under a lease."

With respect to the September and January orders, the Court not only found that the use of the twenty-barrel base allowable per well was arbitrary, but proceeded to show wherein and why such use was arbitrary. (R. 583, 584.)

The use of the twenty-barrel base allowable is not necessary in order to prevent waste. In fact, it bears no relation to the prevention of physical waste. The trial court so found. (R. 585.) The evidence in support of this finding is without real conflict in the record. Moore, Sorenson and Buck testified that there was no relation between the use of the twenty-barrel minimum and the prevention of waste. (R. 129, 180, 269.) Buck testified that, in view of the varying densities to which the wells in the field were drilled, the allocation of production by the use of the arbitrary twenty barrels per well tended to cause waste rather than to prevent it. (R. 262, 264, 269.)

The evidence further shows that, so far as the prevention of waste is concerned, it is not necessary to operate the wells which produce large quantities of water. (R. 264, 265.) In fact, it would be better, so far as the utilization of the reservoir energy is concerned, that they be not operated, because excessive production of water will tend to lower the reservoir pressure and waste the reservoir energy. (R. 265.) If wells producing excessive quantities of water are plugged and abandoned, the oil, with insignificant exceptions, which otherwise could be produced through them will be driven up-structure and produced through other wells. (R. 264, 265.)

The record further shows that, by use of the twenty-barrel base allowable per well, withdrawals in the eastern portion of the field are excessive. This excessive rate of withdrawal tends unduly to lower the pressure in that portion of the field, and this tends to cause waste. (R. 380, 381, 382.)

The maintenance of the base allowable of twenty barrels per well is not necessary in order to enable wells in the field to operate. Mr. Rowan testified that a pumping well can be operated at a profit on as low as five barrels per well per day. (R. 227, 230.) There are only about 6788 pumping wells in the field. (R. 392.) *The record shows that many pumping wells in the field have been operated over a period of years while producing an average of less than five barrels per day.* (R. 228, 443.) Presumably, they operated at a profit. *Up until the January order, they were subjected to the normal shutdown program.* (R. 443.) Nowhere in the record is there evidence which even

indicated that a pumping well must have an allowable of more than ten barrels a day in order to be operated. There is testimony to the effect that pumping wells producing large quantities of water cannot be operated at a profit on less than ten barrels per day. (R. 435, 438.) However, these wells are relatively few in number. (R. 438.) If they were permitted to produce ten barrels per day, or even twenty barrels per day, they would consume only a small portion of the field allowable. If it were conceded that wells producing great quantities of water should be permitted to produce as much as ten barrels per day, this does not justify the use of a twenty-barrel base allowable even for such wells, nor does it begin to justify the assignment of a base allowable of twenty barrels per day to other wells producing only small quantities of water, much less to pumping wells generally and to the approximately 19,000 flowing wells in the field. This is clearly a case of the tail wagging the dog!

The field has been fully developed, and it is not necessary to drill additional wells in order to produce the oil. (R. 177, 178, 179, 264.) Nearly all of the wells in the field have been drilled for more than two years (R. 443); and wells which have been drilled for more than two years should be paid out. (R. 443.) Therefore, it is not necessary, except perhaps in a few rare instances, that wells have an allowable sufficient to repay an investment.

It is not necessary that the base allocation of twenty barrels per well be made in order that wells on small tracts may be operated. We think that this fact has been demonstrated in the discussion immediately pre-

ceding this paragraph. Appellants seem to think, however, that not only should the owner of a small tract be permitted to drill on his tract, but that he should have some vested right, by use of the twenty-barrel base allowable, to drain oil from his neighbors while his neighbors are being held down.

In the first place, it has never been necessary that even one well be drilled on every small tract in the field. It would have been possible, by pooling arrangements, to have drilled on a much wider pattern. (R. 200.) By pooling arrangements, wells could have been drilled on a ten-acre pattern contemplated by Rule 37.[20] *The fact is that the Commission has not limited drilling to one well for each small tract.* As shown by appellee's Exhibit 16 (R. 507, offered 153), there are some 835 small tracts in the field having less than two acres each, with an average of almost three wells per tract. This has been fully discussed on pages 91, 92 and 93, above. No reason at all is shown why the Commission should capriciously issue permits for numerous additional wells on each small tract. Such action could not possibly justify allowing to the additional wells on such small tracts a base allowable of twenty

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[20]There is little doubt that pooling of small tracts could have been accomplished. See Walker, *The Problem of the Small Tract under Proration Regulations* (1938), 17 Tex. Law Rev. 157; and Summers, *Does the Regulation of Oil Production Require the Denial of Due Process and the Equal Protection of the Laws?*, a paper read before the Section of Mineral Law (A. B. A.) at its Philadelphia meeting, 1940, Veasy, *Compulsory Pooling of Adjacent Tracts into Drilling Units to Conform to an Established Well Spacing Plan*, also a paper read before the Section at its Cleveland meeting, 1938, copies of which have been filed with the librarian of the Supreme Court Library. [illegible] and supporting texts.)

barrels per day and an aggregate allowable unconscionably high. *Brown v. Humble Oil & Refining Company.* Mr. Hudnall, one of the witnesses for appellants, admitted that the allowable of twenty barrels per well is so high as to encourage additional drilling (R. 435), and that he could not defend such an allowable. (R. 431.) Mr. Buck testified that dense drilling, whether on small tracts or large tracts, tends to cause waste by bringing about excessive localized withdrawals and causing an uneven rise of the water table. (R. 262.) The Court made a finding to the same effect. (R. 585.)

The use of the base allowable of twenty barrels per well is not necessary in order to enable leases in the western and eastern portions of the field to recover the equivalent of the oil in place under them. This base allowable obviously was not designed to compensate any part of the field for structural disadvantages, for it was given to all non-marginal wells in all parts of the field, irrespective of structural position. It is, therefore, fitting that the Court should inspect searchingly appellants' assertion in their brief that the twenty-barrel base allowable is necessary, accidentally it seems, in order to compensate both the east and west sides simultaneously for structural differences!

On pages 58-61 of their brief, appellants argue that wells in the eastern one-third of the field should be permitted to produce 20 barrels per day, because they say that wells in that area will have a shorter life. This argument runs counter to appellants' pleadings, for there they admitted "migration of oil from the west

side to the east side of the field," both past and future. (R. 58.) They also stated:

> "*It is fair and proper that leases* in the center of the field and *on the east side* thereof *shall produce at the present time oil in a smaller proportion than the percentage of the acre-feet of saturated oil sand beneath such leases, for the reason that such leases* in the center of the field and *on the east side* thereof *will produce a much longer period of time* than leases or wells located in the western portion of the field." (R. 57, italics ours.)

Such argument also wholly ignores the physical facts and the testimony of all of the witnesses who testified on the subject.

In order to avoid confusion of thought, it is necessary to remember that tight sands occur only in a marginal band, for the most part only about 500 feet wide along the eastern edge of the field. (R. 113, 114, 130, 131, 206.) When appellants speak of the area in which there is material loss of pressure or in which a gas cap may form, they are really speaking of the small strip along the eastern margin and in the southeast portion of the field. Areas in the east third of the field immediately west of this marginal band have very permeable sands ranging from 10 to 30 feet thick. (R. 114, 428.) Water pushes the oil up structure. The east third is the highest portion of the field. (R. 257, 416.) The western portion of the field, then the fairway, then the eastern portion of the field (except the narrow marginal band) will be flooded by water in order. Sorenson so testified. (R. 113, 114, 130, 131.) Moore testified the same way. (R. 206.)

Dr. Patten did likewise. He stated that if pressures in the field decreased substantially to such an extent that gas would come out of solution, he thought that a gas cap would form along the *east edge* of the field and that the effect would be to push *some oil slightly down structure.* (R. 359.) His reference to the east edge of the field clearly refers only to the marginal band mentioned above. On cross-examination, Mr. Hudnall admitted that the east was favored under the orders, and that tracts on the east side would ultimately recover far in excess of the oil originally in place under them. (R. 439, 444, 445.) He also testified that when the Rowan & Nichols lease in the fairway is abandoned (a date which he fixed at 50 to 75 years hence, if the water table continues to rise at the present rate, R. 395), 90% of the field will have been abandoned due to water flooding and only an additional 5% will have been abandoned on the east side due to low pressures. (R. 393, 394.) The effect of his testimony is that the east-side abandonments due to low pressures or to encroachment of a gas cap will amount, over a long period of time, to only about 5% of the present field area. Thus all of the witnesses agree that nearly all of the east third will produce after the west third and the fairway are abandoned.

While the record shows that some 163 wells have been abandoned on the east side (R. 391), the probabilities are that very few additional abandonments on the east side will occur in the near future. (R. 113, 114, 130, 131, 206.) The field has been producing for nine years and the east side properties have as much oil under them as they had in the beginning. The water

drive is continuing to push oil from the west and from the fairway to the east. (R. 195.) Appellants would apparently have the Court believe that the migration of oil from west to east stops in the fairway. (Brief, p. 57.) As we have shown, all of the witnesses who testified on the subject, stated the contrary.

It is recognized that wells on the west side of the field, where the water is encroaching, should be permitted to produce at a more rapid rate than wells in the eastern portion of the field. (R. 271, 272.) The west-side wells will be drowned out in a relatively short time, while the wells in the eastern portion of the field will be drowned out last. (R. 114.) The time element works against the wells on the west side and in the fairway, and in favor of the wells on the east side of the field. (R. 195, 271, 272.)

The only possible justification for the base allowable of twenty barrels daily to wells in the western portion of the field is the allocation of twenty barrels daily to wells in the eastern portion of the field. This allocation to wells in the east steps up the drainage from west to east. If the allowable for east-side wells and properties were reduced to a proper figure, there would no longer be any reason for maintaining the base allowable of twenty barrels for wells on the west.

The undisputed evidence shows that the sands in the fairway are from ten to one hundred times thicker than they are on the west and east sides, whereas under the September and January orders the spread in allowables is from slightly over twenty barrels to slightly under fifty barrels per well (R. 198), although the average wells in the fairway produce around 35

barrels per day. (R. 406.) There is practically no spread at all under the June order and the order now in force. How can the average well in the fairway which is permitted to produce only slightly more oil per day than the average well in the eastern portion of the field currently or ultimately recover from ten to one hundred times more oil than a well on the east side, as it must do if it is permitted to produce its fair share? Not even a magician could bring about such a result![30]

It necessarily follows that the properties in the eastern portions of the field in particular, not only currently but ultimately, will obtain far in excess of their fair shares of the oil. (R. 177, 444, 445.) The effect of the orders is to hold the fairway properties down in order that the oil may migrate from the west and the fairway to replenish the east as it is produced. (R. 176, 177.)

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[30]Mr. Hart, in cross-examining Mr. Moore, brought out the fact that as the water table rises, the west will be flooded out first, the fairway second, and the east last (R. 195); and that the water table is rising more rapidly under the fairway than under any other portion of the field. This indicates depletion of the fairway properties at a more rapid rate than other properties in the field are being depleted. The drainage to the east is accentuated by the use of the base allowable of 20 barrels per well. (R. 164, 177, 179, 202, 205, 258, 270, 282, 318.) Hudnall, on cross-examination, admitted that the east side of the field is being produced too fast, and that east-side pressures would be increased if the allowable per well in the eastern portion of the field were reduced. (R. 423, 424, 428.) *He also admitted that the east-side properties are being favored under the orders complained of, and that he could not defend the 20-barrel base allowable.* (R. 431, 432.) *On cross-examination, he admitted that under the orders complained of, leases on the east side would recover many times the quantity of oil in place under them, and that this oil would be drained principally from the fairway.* (R. 444, 445.)

Appellants' brief, p. 70, states in reference to the plan of proration set forth in the September and January orders, that it permits a recovery by each section of the field of substantially its reserves as nearly as this result can be practically achieved. It cites three portions of the record, none of which by any stretch of the imagination supports the statement. Furthermore, as already stated, since this appeal was perfected the Commission has again put in force the plan of proration contained in the June order, which in no wise considers structural position. This was done in the very face of their findings in the September order that no order can be fair unless it considers structural position, and further in the face of the testimony of their own witness, Hudnall (R. 399), that any formula which does not consider the time element can not possibly give to each lease what it has in place under it.

The base allowable of twenty barrels per well is not justified on the ground that the so-called better wells can not be reduced below the allowable accorded to the few wells producing great quantities of salt water. Appellants say that the twenty barrels per well is granted to the flowing wells and to pumping wells not producing large quantities of water, because the "Commission feels that it would be unreasonable to reduce better wells below the amount granted to poor wells." No member of the Commission testified, and the reasons they had in mind are unexplained in the record. The statement concerning the way the Commission "feels" is not a statement of fact in the record, but is

purely argument. No such "feeling" on the part of the Commission can possibly justify the creation by the per-well allowable of the discrimination in favor of densely drilled tracts over the less densely drilled tracts *in all parts of the field,* which results solely from the per-well factor. In order to eliminate an assumed inequality as between a poor well on the edge and a good well on a small tract in the center, it is not reasonable to discriminate between appellee's le 3 densely drilled leases in favor of the small tracts similarly situated. One inequality cannot be justified by creating a greater one. If the Commission were consistent, the "feeling" which causes it to raise the allowable of a well on a small tract to a point *above* its fair share should not be pursued to the point of cutting appellee's allowable to a point *below* it fair share.

It cannot be said that the methods of allocation used in the orders complained of are the only available methods. While it is realized that it is not the function of the Court, but rather that of the Commission, to determine upon the method of allocation to be employed, nevertheless, the method used must not be discriminatory, confiscatory or unreasonable unless necessary in order to prevent physical waste. It is a striking fact that if the factors used in prorating 25% of the allowable under the orders of September and January were applied to all of the field allowable, appellee's percentage of the field allowable would be almost exactly equal to its percentage of the oil in place in the field. (R. 164-165, 583.) *Buck testified*

that if the method of allocation employed in prorating 25% of the field allowable were used generally, the several properties in the field would be permitted to produce very closely in proportion to the oil in place under them. (R. 270.) Each property owner in the field owns the oil in place under his land and is entitled to a reasonable opportunity to produce it. *If the formula used were applied to all instead of to 25% of the production, it would come very near to achieving this end.* (R. 270.)

It should be emphasized that the sciences of petroleum engineering and petroleum geology have long since passed beyond the "horse and buggy" stage. (R. 82, 83, 84, 107), *Brown v. Humble Oil & Refining Company.* Well logs and electric logs are available for hundreds of wells in the field. (R. 93.) From the data obtained in such logs, the thickness of the total oil section can be determined and the amount of shale and other impervious matter can be ascertained. From samples of cores and cuttings taken the porosity, permeability, and amount of connate water can be determined. From these data, the amount of pore space between the grains of the oil sands can be calculated. In this way, the amount of what is called the net effective oil sand can be ascertained. (R. 82, 83.)

The Railroad Commission estimated 4,961,546 acre-feet, the appellee estimated 4,976,020 acre-feet (R. 192), and Buck estimated 4,990,350 acre-feet (R. 248) of effective oil sand in the East Texas Field originally. While all witnesses agreed that there was a possible margin of error in estimating reserves (R. 169), *the*

record shows without dispute that any possible error would apply to the field as a whole to the extent that it applied to a particular lease, and that the relative amount of oil in place in the field as a whole and under the several leases could be ascertained almost free from error. (R. 169, 883.) According to appellants' witnesses, in the business world estimates are made and leases are bought, mortgaged, and sold on the basis of such estimates. (R. 376, 429, 430.) Hudnall said that they were reasonably accurate. (R. 430.)

The Commission has made no serious effort to utilize the engineering and geologic information available to it, or the technical knowledge at its command, in drafting its proration orders for the East Texas Field. The available engineering and technical knowledge is such that by use of such factors as potentials, bottom-hole pressure, sand thickness and acreage, even with a reasonably small well minimum of five barrels or less, in a proper way, the Commission could come much nearer affording to each operator, including appellee, an opportunity to produce his fair share of the oil. By doing this the Commission could bring about ratable withdrawals all over the field and better utilize the reservoir energy and thereby prevent waste. (R. 585.)

This is said only for the purpose of showing the Court that the task before the Commission is not a difficult or impossible one. While no order could be written that could give to each operator his share exactly, the Commission could prorate the allowable production among the operators in the field in such man-

ner as to give to each approximately his fair share of the oil, if it really were to make a serious effort to do so. (R. 170, 263, 270.)

From the foregoing facts, the conclusion seems inescapable that the orders complained of as to appellee are wholly unreasonable. They deprive it of a reasonable opportunity to recover its fair share of the oil, both currently and ultimately: We have shown that the orders are not necessary in order to prevent waste, but that on the contrary the method of allocation employed tends to cause waste. Regardless of the view which the Court may take with respect to the constitutional questions involved, there is no reasonable doubt that the orders complained of as to appellee violate the provisions of the Texas statutes which require that allocation must be made on a reasonable basis, and that, consequently, the injunction was properly granted.

VI.

Appellee used due diligence and exhausted its administrative remedy.

Over a period of years, appellee has protested against the system of proration maintained by the Railroad Commission for the East Texas Field. (R. 518.) On June 16, 1939, appellee filed with the Railroad Commission its written protest against the method then employed by the Railroad Commission in prorating the East Texas Field, that method being the

same method embraced in the proration order of June 19, 1939. (R. 515-519.)

The Railroad Commission issued its order of September 11, 1939, prorating the allowable production in the East Texas Field, being one of the orders complained of in this action. On the day the order was entered, appellee protested against its entry on the ground, among other things, that it would not afford to appellee an opportunity to produce its fair share of oil from the field. (R. 337.) The order of September 29, 1939, was entered and, as shown above, it was substantially the same as the September 11th order. By its action, the Commission refused to grant appellee's request for an adjustment of its allowable. Appellee's supplemental complaint in this action was filed October 3, 1939. (R. 41.) The order of January 24, 1940, being essentially the same as the order of September 11th, was later entered (R. 138), and the case was tried on its merits on February 13-16, 1940. (R. 570.) Thus, it will be seen that the repeated efforts of appellee to obtain relief from the Railroad Commission were futile, and it was compelled to file and prosecute this suit.

As was said in the *Brown* case, the real remedy to which appellee is entitled is an adjustment of its allowable. *Brown v. Humble Oil & Refining Company*, 126 Tex. 296, 312.

CONCLUSION

For the reasons stated above it is respectfully submitted that the judgment of the District Court for the Western District of Texas should be affirmed.

Respectfully submitted,

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APPENDIX
RAILROAD COMMISSION OF TEXAS
OIL AND GAS DIVISION

OIL AND GAS DOCKET NOS. 108, 120, 123, 124, 125, 126, 128, 129, 132 and 146 #20-1841

IN RE: CONSERVATION AND PREVENTION OF WASTE OF CRUDE PETROLEUM AND NATURAL GAS IN THE STATE OF TEXAS.

Austin, Texas
August 28, 1940

Special Order Fixing the Allowable Production of Crude Oil in the Various Fields and Districts in Texas.

WHEREAS, After due notice, hearings have been held in Austin, Texas, at various times, including the hearing on August 1, 1940, with respect to the existence and imminence of waste of oil and gas in the State of Texas, and the prevention thereof; and

WHEREAS, In view of the evidence, including among other matters the physical conditions in the various fields, the transportation and marketing facilities, the reasonable market demand, the reasonableness of the allocation as between fields of the allowable production under previous orders; and

WHEREAS, The Railroad Commission of Texas finds from the evidence that the reasonable market demand for oil produced in this State from the various fields and districts therein equals the amount hereinafter shown as the allowable production thereof during the period beginning 7 a. m., September 1, 1940, until 7 a. m., December 1, 1940, and

WHEREAS, The Railroad Commission of Texas finds that waste exists and is imminent and that to prevent such waste of oil and gas as the same is de-

fined by the applicable statutes, it is necessary to restrict the production of oil in the State of Texas to the reasonable market demand:

* * *

RULE 23. (2) THEREFORE, IT IS FURTHER ORDERED By the Railroad Commission of Texas that during each twenty-four (24) hour period beginning at 7 a. m., Central Standard Time, July 7, 1940, the owner or operator or manager of each well in the EAST TEXAS FIELD shall be permitted, either collectively or individually, to produce daily from each well a maximum of TWO AND THIRTY-TWO HUNDREDTHS PER CENT (2.32%) of its hourly potential capacity as determined by the commission.

PROVIDED FURTHER That all wells which would not receive as much as 20 barrels per day when limited to a maximum of 2.32% of their hourly potential capacity shall be entitled to produce 20 barrels per day if such wells are capable of producing this amount of oil.

This order shall become effective September 1, 1940, at 7 a. m, and shall remain in full force and effect until 7 a. m., December 1, 1940, unless modified, changed or amended by due order of the commission.

* * *

IT IS FURTHER ORDERED That this cause be held open on the docket for such other and further orders as may be necessary and supported by evidence of record.

RAILROAD COMMISSION OF TEXAS
LON A. SMITH, *Chairman*
ERNEST O. THOMPSON,
JERRY SADLER, *Commissioners.*

(SEAL)
ATTEST: C. F. PETET, *Secretary.*

8

SUPREME COURT OF THE UNITED STATES.

No. 57.—October Term, 1940.

Railroad Commission of Texas and Lon A. Smith, Ernest O. Thompson, et al., etc., Appellants.
vs.
Humble Oil and Refining Company.

Appeal from the District Court of the United States for the Western District of Texas.

[January 6, 1941.]

Mr. Justice Frankfurter delivered the opinion of the Court.

This case is a companion case to No. 218, *Railroad Commission* v. *Rowan & Nichols Oil Company*, decided this day. There are minor variations in the facts of the two cases, but not of sufficient moment to call for particularization. The decision in the *Rowan & Nichols* case is decisive of this.

The decree is vacated and the case is remanded to the district court for dismissal of the complaint.

So ordered.

The Chief Justice, Mr. Justice McReynolds and Mr. Justice Roberts dissent.

A true copy.

Test:

Clerk, Supreme Court, U. S.